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THE GENESIS AND DEVELOPMENT

OF

BALANCED FARMING IN MISSOURI

A Case Study

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Agricultural Extension Service
and

UNITED STATES DEPARTMENT OF AGRICULTURE

Foreign Agricultural Service

and

FOREIGN OPERATIONS ADMINISTRATION

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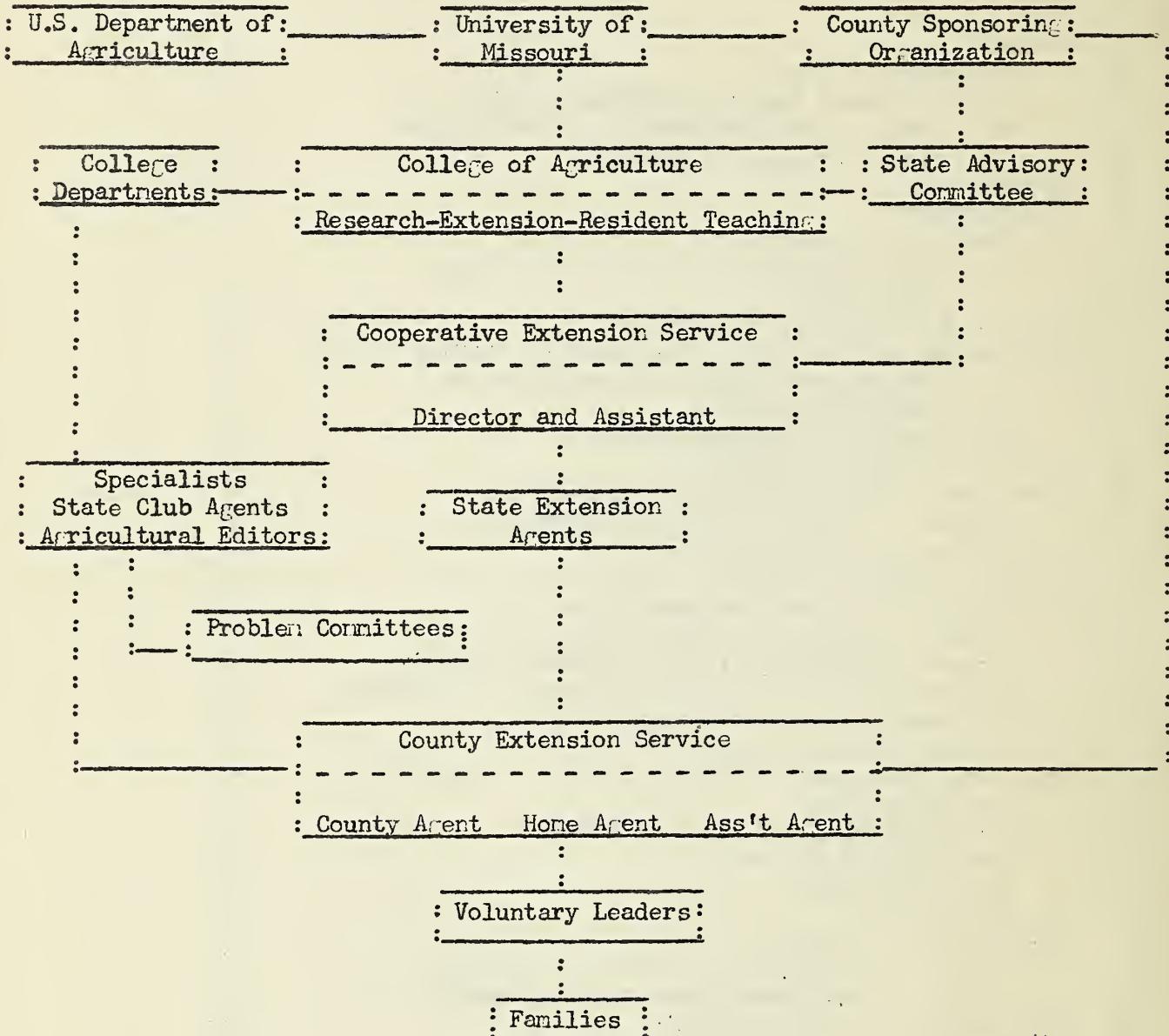
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TABLE OF CONTENTS

	<u>Page</u>
Preface	
Organization Chart	I
State Balanced Farming Committee - 1954	II
Key Events in the Development of the Balanced Farming Program in Missouri	III
Introduction	1
The Background	1
The Rural Situation	1
Program Planning Prior to Balanced Farming (1914-1936)	2
The Extension Organization	3
The Meaning and Genesis of the Balanced Farming Concept	4
The Meaning, Philosophy and Advantages of Balanced Farming	4
The Genesis of Balanced Farming	6
Why the Family Approach	11
Developments During the Period 1946-1953	12
Support of Farm and Civic Organizations	13
Progress in the New Effort	14
Status of Balanced Farming - 1954	15
Organization and Functions of the Staff	15
Other Aspects of the Organization	17
Methods Used in Publicizing Balanced Farming	19
Pre-Service and In-Service Training of the Staff	19
Problems of Balanced Farming	20
Accomplishments to Date	22
Balanced Farming at the County Level - A Case Story	22
The Background	22
The Development of Balanced Farming	25
The Planning Process	26
Accomplishments	28
The Future	28
The Grass Roots Level	29
Case I - The Norman Smith Farm and Family	29
Case II - The Robert Jones Farm and Family	34
The Future of Balanced Farming	44
Retrospect	45
Appendices	
A. Agricultural Extension Service Staff	49
B. The Rural Situation in Missouri	50
C. Suggested Outline - Balanced Farming School	55

ORGANIZATION CHART OF THE MISSOURI AGRICULTURAL EXTENSION SERVICE - 1954

State Balanced Farming Committee - 1954

John Falloon	- Chairman, Soils Department
Frank Graham	- State Agent
J. U. Morris	- State Agent
Josephine Flory	- Foods
Madonna Fitzgerald	- Home Management
Lillian Watkins	- Home Management
Louise Woodruff	- Home Management
Alice Alexander	- Home Management
Orene Cowan	- Clothing
Katharyn Zimmerman	- State Home Demonstration Agent Leader
Marion Clark	- Agricultural Engineering
E. T. Itschner	- Dairy
Elmer Winner	- Information
Ross Fleetwood	- Crops
Wm. Pugh	- Animal Husbandry
Schell Bodenhamer	- Poultry
Grant Schrun	- 4-H
C. E. Klingner	- Agricultural Economics
Albert Hagan	- Agricultural Economics
Paul Bebermeyer	- Agricultural Economics
C. R. Pitney	- Agricultural Economics
C. R. Meeker	- Agricultural Economics

KEY EVENTS IN THE DEVELOPMENT OF THE BALANCED FARMING PROGRAM IN MISSOURI

- 1936-1938 - Mr. Donald Ibach of the Department of Agricultural Economics begins individual farm planning as a farm management project and establishes a number of demonstrations throughout the State.
- 1938 - Mr. Ibach leaves the college for another position.
- 1940 - Mr. Ed. Crosby, Extension Economist of the Department of Agricultural Economics, and Mr. Albert Hagan, Farm Management Specialist of the Department of Agricultural Economics, stimulate interest in farm planning by showing pictures of Mr. Ibach's demonstrations to Extension workers and farmers of the State.
- 1941 - A four-day session of agricultural Extension specialists and supervisors is held to determine ways of doing farm planning. State Extension Balanced Farming Committee is formed following this meeting as Director Burch and his staff decide to launch a Balanced Farming movement.
- 1941 - County Agricultural Agents are trained in farm planning techniques at district meetings. Likewise, state and county Soil Conservation Service personnel and Farmers Home Administration personnel received training in Balanced Farming.
- 1943 - Home Demonstration Agents receive training in farm and home planning along with County Agents (for the first time) at district meetings in the State.
- 1946 - Balanced Farming Movement gains momentum with conclusion of wartime emergency work and aid of additional funds.
- 1946 - First Balanced Farming Association is formed.
- 1950 - Forty-four Balanced Farming Associations are in operation.
- 1950 - Number of Missouri farms with Balanced Farming Plans totals 21,000.
- 1953 - Approximately 25,000 farm families are participating in Balanced Farming Movement.
- 1954 - Balanced Farming receives new impetus with provision of new funds from the Federal government for farm and home planning work.

INTRODUCTION

During the spring and summer months of 1936, the College of Agriculture of the University of Missouri launched a new effort in farm planning under the guidance of the Farm Management Department. The new attempt in farm planning met with some success but soon encountered resistances which threatened the future possibilities of the work. Out of these problems and the vision of the Director of Extension grew a new concept or method of doing Extension Work and a broader interpretation and perspective of farm planning on the individual farm. This new approach to doing Extension Work has come to be called "Balanced Farming" in Missouri; in many states it is referred to as simply "farm and home development".^{1/} The Balanced Farming method of doing Extension Work in Missouri is now approximately 15 years old. In the eyes of Missouri Extension folk and those of many observers, the program has met with substantial success. It has attracted the attention of foreign and domestic agricultural Extension people alike.

The story that follows is a brief recapitulation of what has taken place. It is a story of the genesis and development of the Balanced Farming Program of the Missouri Agricultural Extension Service. The account covers the meaning and the origin of the Balanced Farming concept, the progress and problems of the program during the developmental stages, the status quo of the program at present, and a glimpse into the future. While it is believed that this report will be of interest and value to all agricultural Extension personnel wherever they may be, it should be mentioned that the article is prepared primarily for agricultural Extension administrators. Therefore, the account gives more attention to philosophy, principles, and administrative problems and solutions than to the actual techniques of doing Balanced Farming work.

THE BACKGROUND

For a better appreciation and understanding of what is to follow, it seems desirable that we pause for a moment to familiarize ourselves with some of the basic facts of Missouri Agriculture, the organization of its Extension Service, and program planning as it was done prior to Balanced Farming.

The Rural Situation

There are four main regions in Missouri: The Lowlands in the Southeast, the Ozark Highlands, and the prairies of the Southwest and Northeast, and the rolling uplands of the Northwest. The two great rivers, the Mississippi and Missouri, form the outlet for drainage purposes. Altitude varies from 300 feet to 1,600 feet, the greater part of the agricultural land lying between 300 and 1,000 feet.

^{1/} The author hastens to add that the term "farm and home development" has many meanings in the United States. This aspect will be taken up at greater length later in this article.

Rainfall varies from 32 inches in the Northwest to 48 inches in the Southeast. Approximately half the rain falls during the growing season but the tendency is for a too heavy precipitation in the early growing days and too little during the following period, with resultant difficulties in areas with impervious soils. Average annual temperatures vary from 50° F. in the Northwest to 60° in the Southeast. While the average length of the growing season is from 165 to 180 days, in the extreme Southeast there is a growing season of 200 days. The climate is of the European continental type, and temperature plays an important part in determining the types of farming practiced.

The total population of the State is approximately four million, a million of which is accounted for by farm people. The total land area comprises 44,304,640 acres, of which 35,123,143 acres are under farms. Total area in commercial farms amounts to 30,548,220 acres or 87% of the total farm area.

There are 114 counties in Missouri with a total of 230,045 farms. About 200,000 of the 230,045 farms are of a commercial nature. The agriculture of the state is highly diversified. It is estimated that 75% of the farm income of the state comes from livestock and livestock products. The cash income of cotton, soybeans and wheat, follows livestock in about that order. At the present time, the average size farm in the state is approximately 150 acres. The majority of the farms are of the family type though usually hired labor is employed from time to time. Most of the farms are owner-occupied. The character of the land ranges from the rich flat soil of the river valleys to the poor rugged soil of the Ozark mountains. The state ranks sixth in the United States in terms of agricultural income. 2/

Program Planning Prior to Balanced Farming (1914-1936)

Program planning in Missouri has gone through several stages of development. In the early days the County Agent tended to develop and carry out programs which reflected primarily his views of the situation. As knowledge and experience in program planning and implementation accumulated, this tendency upon the part of the County Agent disappeared. The agents found that farm people themselves knew what their needs and problems were and that they had sound ideas as to how their needs and problems should be met. Program planning then became a joint responsibility of the farm people and the Extension workers. This principle of having farm people develop their own programs with the assistance of the professional workers of the Extension Service was established early in the history of the Missouri Extension Service and has been closely adhered to over the years.

Perhaps the greatest changes in program planning in Missouri deal with the approach. For many years college Extension specialists operating from fourteen different subject matter departments carried their stories to the counties of the state. During this stage of development, it was largely a case of the best salesmen winning out. In a sense each specialist competed

2/ See Appendix B "The Rural Situation in Missouri" for details.

with all the other specialists for the attention of the County Agent and the farm people. It was one project against another project. It was in fact a laissez-faire period.

This project approach at the state level tended to formalize in the mid-thirties with the establishment of college committees whose main function was to develop state guides on types of farming areas. The guides were then sent to county workers and were used to help develop county programs.

At the county level a system of long range planning has come into being over the years. The procedure consists of the following steps: Once every 3-5 years a County Rural Program is reviewed and revised. Community meetings are held to determine the needs and wants of the community. The situation, objectives, problems and possible solutions are discussed at length. This is followed by a county meeting of community leaders to perform the same task on a county level.

The county Rural Program is reviewed and revised annually by the County Rural Program Committee to meet changing economic and social conditions. Annual goals and plans of work are developed at the time of these annual reviews.

The County Rural Program serves as a guide not only for the County Extension Service but for all agricultural institutions, public and private working with rural people.

The Extension Organization 3/

The Extension Organization that had come into being to carry out the Missouri Extension program followed the orthodox American Extension pattern in most respects. At the State level the Extension Service was located in the College of Agriculture on a coordinate basis with the divisions of research and resident teaching. The Director of Extension was directly responsible to the Dean of the College of Agriculture.

The Director's administrative staff consisted of an Assistant Director, and a corps of state agents to supervise the county Extension workers. In addition there were Information, 4-H Club and agricultural and home economic subject matter specialists.

At the county level, each county having the services of an Extension agent was and is required to have a group of farm people responsible for the local financing and for assisting in planning and supervising county Extension work. The expenses of the county Extension office, the travel of agents, and part of the salary of associates and assistant agents are paid from funds provided from sources within the county, largely county court appropriations, under the terms of the Missouri County Agent Law.

The Board of Directors of the sponsoring group must include one or more persons from each township in the county and should consist of an equal number

3/ There have been minor changes in the Extension Organization as the result of Balanced Farming. These will be taken up later.

of men and women. The Board's function is to act for the rural people of the county in all matters dealing with the Cooperative Extension Service. The Board enters into a formal written agreement with the College of Agriculture, approves all county Extension workers, and employs county Extension office secretaries on recommendations of the county Extension agents. The Board also agrees on the Extension work to be done by the agents and assists in selecting leaders and demonstrators for carrying on the work.

The Board, or an executive committee of the board, meets periodically, usually every month, to hear reports of agents, examine and approve all bills of the county Extension Service, and to advise the agents in planning and carrying out future Extension activities.

The County Agricultural Agent and the Home Demonstration Agent in addition to conducting their respective programs also carry out the 4-H Club program in Missouri.

THE MEANING AND GENESIS OF THE BALANCED FARMING CONCEPT

The Meaning, Philosophy and Advantages of Balanced Farming

"What is Balanced Farming? Is the term "Balanced Farming" synonymous with farm and home planning? And if so, which definition of farm and home planning?" 4/

Fortunately for the observer, the answer is clear. Balanced Farming has a very definite meaning in Missouri agricultural circles. Director Burch has described Balanced Farming in these words:

"The Missouri Extension Service taught individual farm practices, as did all State colleges, until 18 years ago when the need became apparent for a system of farming that would tie all of the good practices, recommended by the college for a farm, together in a way to give the greatest net income consistent with continuing improvement of the soil. Throughout the years certain farmers have specialized in beef cattle production and perhaps failed to improve their pastures, and others specializing in crop production failed to receive high net income because of poor feeding practices. The college, with its traditional 12 to 14 departments and Extension specialist for each, undertook to save the farmer by teaching the individual practices, leaving it to the county agent or the farmer to tie these practices, together, if any attempt along that line was made.

4/ One of the problems of farm and home development (or planning) endeavors in the United States is one of definition and concept. Farm and home planning is considered by some people as "a way of doing extension work", by others as "a bundle of facts to be taught" and by still others as "a technique for appraising alternative opportunities open to farmers; and there are other interpretations. The word "program" when applied to Balanced Farming has the connotation of "approach", "method", "activity". It does not mean "program" as used in Extension circles.

"This idea of developing a system of farming, called in many states Farm and Home Planning, is called Balanced Farming in Missouri. The objective has been to achieve a balance between the input and outgo of soil fertility, a balance between the type of soil and the crops they feed, a balance between the livestock system and the desires of the operator and his labor supply, a balance between the net income and the needs of the farm family, and a balance between good planning, hard work and a comfortable, attractive home." 5/

More specifically, Balanced Farming is a method used in Missouri to encourage the adoption of a group of farm and home practices that are suited to a particular family. This method consists of analyzing the present farm and home situation, discovering the goals, needs and wants of the farm family, and then assisting the family in working out a farm and home plan to meet them. It is a method that applies to small farms, medium sized farms and large farms. It applies to all types of farming.

The major objective of Extension Work is the most healthful and satisfying living for the farm family. The task of the Balanced Farming approach is to harness up and to integrate the resources of the farm family, the community and the state to reach this objective. Essentially Balanced Farming is farm management in its broadest terms. It means taking the resources available to farm families - resources of land, of family labor, of livestock and equipment - and making the best possible use of them.

The philosophy of Balanced Farming rests upon the beliefs that:

- (1) A sound farm plan is as essential to success in the management of a farm as is a blueprint for a good building.
- (2) The major objective is better farm family living, upholding the dignity of the individual.
- (3) A plan for soil improvement alone is not realistic. It must be fitted in with the crops and livestock in order that it will work and can be paid for.
- (4) A farm plan is necessary for thrifty, profitable livestock.
- (5) Any National farm program should base incentive payments upon the individual farm plan.
- (6) Self reliance is as important as ever. "We will have national soil conservation only when the individual farmer accepts the responsibility of improving his own land and views governmental assistance as a minor contribution." 6/

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- 5/ J.W. Burch. "The Missouri Plan (Balanced Farming)" Address for the American and Western Farm Economics Association. Laramie, Wyoming, August 18, 1949
- 6/ J.W. Burch. "The Philosophy of Balanced Farming". Address for meeting of American Society of Farm Managers and Rural Appraisers, Columbia, Missouri. June 11, 1948.

Why follow the Balanced Farming method of doing Extension work? Why not use some other system? Missouri Extension folk mention the following points as advantages of the Balanced Farming method:

1. It centers attention on the farm family and sets the family's satisfaction as Extension's goal instead of adoption of practices.
2. It enables the family to see more clearly the need for improved practices making the matter of adoption simpler, more natural and more permanent.
3. It portrays practices as means, not ends.
4. It fits practices into proper places as related to other practices. It is a means of integrating and gearing together all of Extension's efforts toward aiding the farm family in the most helpful way.

The Genesis of Balanced Farming

How did this idea come into being in Missouri? For an explanation we must turn to the life experiences of Director Burch - for Director Burch more than any other man is responsible for the Balanced Farming program in Missouri.

After World War I, Director Burch farmed for a short time as a tenant farmer. This was a tough financial period as many of you may remember. Pressed by financial conditions, Director Burch gave up farming to enter Extension work in 1921.

After serving a few years as a county agent, the Director moved into the college as a swine production specialist. In this capacity he found himself working next to a specialist in beef production. Each specialist carried on his own work in his immediate field. Separate meetings were held in the counties of the state on beef and swine production and the like. There was no mechanism or device of tying together the specialists' services.

This procedure represented a waste of time and effort in Burch's opinion because farmers were interested in both swine and beef production. As soon as he became project leader, he eliminated such positions as swine specialist and beef specialist. Henceforth, everyone in the livestock project was a livestock specialist.

The people in the Department of Agricultural Economics frowned upon the livestock specialists for giving outlook information at farm meetings. On the other hand, Burch felt that a livestock specialist could not offer sound recommendations on production without relating them to economic outlook. In his opinion the farmers expected this information. Likewise Burch did not know how a good livestock specialist could talk with farmers about good livestock without bringing in the matter of good pastures. Thus Burch was thinking from a farmer's viewpoint on a proper program approach.

He realized too that the business of farming had changed greatly from former years; it required a lot of capital and a lot of technology. It was very competitive. Two crop failures might mean the loss of the farm. All of these facts meant that the American farmer needed the best economic information that he could get and the best recommendations on practices in an integrated way.

Let us leave Director Burch and his experiences for a moment. In 1936 another development was beginning to take place at the college. Mr. Donald Ibach of the Department of Agricultural Economics became interested in individual farm planning as a means of doing Extension work. Ibach wanted to fit the various programs of the college together. He considered the operation as primarily a farm management one.

Ibach set to work on his plans. He wanted to establish a demonstration farm in every county of the state. He also wanted to hold county planning schools to train farmers in making their own farm plans. In retrospect it can be said that some of Ibach's plans came to be realized in the course of the next two years. He succeeded in getting a few result demonstrations on farm planning started, and he held some county meetings on farm planning.

Ibach had attempted to enlist the support and active assistance of other specialists of the college in conducting the county planning sessions, but his efforts were not very successful. Some of the specialists felt that Ibach was taking over part of their work, and that they were being called upon to help out in a farm management project. There was also the fear that their respective fields might be encroached upon if such an effort should succeed.

Director Burch had been observing Ibach's work on farm planning with some misgivings. In some respects it seemed like a step in the right direction, but in other respects it did not add up properly in his judgment. He also had noted the mental reservations of some of the specialists on a solely farm management approach.

Ibach left the college in 1938 to take another position, and his farm planning movement in Missouri lost momentum.

In the fall of 1939 a Missouri county agent, Albert Hagan, was brought into the college to work in the Department of Agricultural Economics. Shortly after Hagan's arrival, Hagan and Ed. Crosby, another member of the Department of Agricultural Economics, had a talk with Director Burch. Director Burch with his vision of pulling things together expressed his unhappiness concerning past and present farm management projects. He urged Crosby and Hagan to take a fresh look at the situation.

Crosby and Hagan spurred on by Director Burch's words decided to develop a few slide picture stories on 35 mm film showing the interrelationships of farm enterprises. Three slide stories were developed depicting true situations. Ibach's result demonstration came in handy for this purpose. Then during the summer of 1940 these slides were shown at many farmer meetings. The slides

created a great deal of interest and they helped sell the agents as well as the farmers on farm planning.

This move was followed immediately by Extension workers beginning to do farm and home development work. The college put on a drive to get farm planning included in every county Extension program.

In the meantime Director Burch had been following these developments with a close eye. It seemed to him that the time was ripe to embark upon a new method of doing Extension work. The college staff, agents, and farm people had shown great interest in the illustrated stories showing the results of farm planning. He felt, however, that the approach needed broadening. In his opinion it could not be just a farm management project if the proper overall farm and home approach was to be achieved.

Director Burch talked with Mr. Crosby about the idea of integrating the various projects of the extension specialists into an Extension program. As a result of this discussion it was decided to call the agricultural Extension specialists together and to see what could be done in this direction. During the conference that followed specialists visited a farm and developed plans for its reorganization.

The first two days of the conference were spent in planning the farm and the next two days in hammering out differences. Director Burch has described this session as follows:

"Twenty-two specialists and supervisors spent four days in teams of four men each planning farms and arguing over the plans. Since practically every specialist had been a successful county agent, it was not long until the poultry specialist knew how to lay out a good water management system, not that he expected to do that, but in order that when he talked to county agents and farmers about new poultry practices and the need for poultry sanitation, he made sure his recommendations fitted into an overall plan that took care of erosion as well as raising healthy pullets. The swine specialist quickly recognized that preaching hog sanitation is a futile gesture unless there is a system developed on the farm whereby there will be at least three fields as a minor rotation of corn, small grain, and clover. This provides good pasture and clean ground. Each field must be fenced hog tight and provision must be made at the outset for water in each. Whereas our service preached hog sanitation for years prior to Balanced Farming, our results were very scanty, but now with Balanced Farming we help the farmer plan for hog sanitation so that it is the easy and natural thing for him to do with his hogs." 7/

At the conclusion of the four-day meeting the Director asked the specialists what their reactions were to this integration endeavor and whether there should be a college Extension committee established to study

7/ "The Missouri Plan (Balanced Farming)" Op Cit.

and to advance this new method of doing Extension work. The reaction was heavily in favor of going ahead. Also it should be mentioned that something had happened to the morale of many of the specialists during this four-day period. The fear of the specialist that his field was being encroached upon by a farm planning project had disappeared to a large extent.

Before going further it is well to pause and consider the Director's steps to this point. He had knocked down the walls of antagonism and the fears of job encroachment by conducting the four-day session and by the clear announcement that this new approach would be an overall Extension effort and not merely a project of some particular department. Furthermore, he had decided to handle the Balanced Farming effort by means of a committee. He felt that in spite of a committee's clumsiness, as an administrative technique this was the only way to gain the necessary cooperation and support of the people concerned.

The Director's next move was to appoint a committee. He selected one man from each major project which he felt would have a contribution to make in a Balanced Farming approach. They were individuals whom he considered favorable to the new program. After this was done, he named a soils specialist, Arnold Klemme, as chairman of the committee. He believed that such an appointment would allay any fears that the agricultural economists were in the saddle.

The success of the Director's moves in establishing the committee are reflected in his observations some years later. He said that committee has really functioned. It has fought and bled to get Balanced Farming going in the state. It takes as much personal pride in the Balanced Farming effort as the Extension director. It is their program, the program of the Extension Service, and the program of the farm people of the state.

On another occasion Director Burch referred to the good work of the committee as follows:

"The Balanced Farming program has been handled largely by a committee of specialists and supervisors, with a soils specialist as chairman. The program does not belong to the farm management or any other department. Each specialist has an opportunity to push his line of work to the limit but does so in cooperation with other specialists in developing systems of farming. The dairy specialist has come to recognize that the dairy farmer will not succeed unless the soil is improved to enable an abundance of good feed to be grown to make for abundant and low cost production. The crops and soils specialists recognize that improving the soil and growing an abundance of feed is of no avail unless there is good livestock management to get the most dollars out of the increased feed production." 8/

One other step remained to be taken in the task of organizing for the Balanced Farming effort. Burch felt that the leadership for the new program

should rest clearly in the Director's office. To provide additional help for this purpose he created a new position of Assistant Director for Programs and brought in Mr. Crosby of the Department of Agricultural Economics to fill the position.

It is not possible to go into all the steps taken by the Missouri Extension service to train its personnel in Balanced Farming and to promote the method with farm people of the state.

However, some of the major steps were: First, the service trained each of the twenty-two agricultural specialists in farm planning from A to Z. Second, it trained agricultural agents at district meetings of the state. And finally, county agricultural agents began to do actual farm planning and to instruct farmers in the technique.

Demonstrations, schools, field days, and all the traditional extension methods have been used. One concept has been held to throughout the years. It must be the farmers' own plan. Director Burch has said:

"Even though it takes much longer for the county agent or associate agent to stay with that farm family until they think through what they want to do and why, than it would be for the agent to plan the farm, it is the only way to do it if we expect the farmer to do anything about the plan that is made. Changing economic conditions mean that plans must be changed. Therefore, if the farmer does not help make his plan, he does not know how to change it when he should. He will simply lay up his paper plan on the mantle by the clock and let it gather dust." 9/

Returning to the progress of Balanced Farming in Missouri, it can be said that it got off to a good start in 1941 and 1942. The Dean of the College of Agriculture and department heads began to give more and more support to the new effort as they learned about it through the reporting of Extension specialists. The practice of having Extension specialists responsible for subject matter to their respective department heads helped in gaining this vital support at the departmental level.

The support within the Extension organization itself was generated in several ways. We have already mentioned the use of committees. The actual mechanics of doing farm and home planning work itself was another. It seemed to sell and indoctrinate the Extension staff in the true value of the Balanced Farming approach. More fundamentally, however, the advancement of the work was a product of an administrative environment which permitted each staff member to contribute to the maximum of his capabilities. Director Burch, Assistant Director Crosby and Mr. Klemme provided the atmosphere and the leadership which permitted the full strength of staff members to get behind and push the new effort. A team spirit and approach came into being. However, as the war continued and the emergency demands on the Extension Service increased, it was found necessary to postpone much of the Balanced Farming work until a later date.

Why the Family Approach?

Up to this point nothing has been said about the home side of Balanced Farming and for a very good reason. The original decision was to start with farm planning, and then after that move was well underway, to start home planning. Consequently, in 1943 we find that Home Demonstration Agents for the first time are receiving instruction in farm and home planning along with County Agricultural Agents. In looking back Director Burch says this was a mistake.

"We have made lots of mistakes in the development of our program and one of them was to assume that it would be better to start the agricultural part of Balanced Farming first and bring in the home side later. We are now making every attempt to rectify that mistake. The object of Balanced Farm planning is better farm family living. Therefore, we start today figuring what the family needs in the way of income to bring them in the amount of money for the things that they need. If the old plan doesn't produce this necessary income then a different plan obviously must be worked out. Small farms naturally must go into intensive systems of farming. If the operator doesn't like intensive systems then it is now clear to him that if he is to have a decent living, he must have more land or change to intensive farming.

"I spent last Thursday in Osage County, Missouri, where thousands of farm people gathered at a Balanced Farming Action Day in what is known as Deer Creek Valley where 5 adjacent farms have complete Balanced Farming plans in operation. It is a wonderful sight to see the farm homes with all the labor-saving devices that have been developed since they started Balanced Farming. Of the 300 farm families now doing Balanced Farming in this little border Ozark county over 1/3 of them have built new homes or have remodeled the old ones. Their plan provides the family a high plane of living, electricity, water under pressure in the home, a kitchen sink, bathroom, and plans for health and educational needs. I mention this since we recognize now that farmers must necessarily move slowly in making home improvements as funds will permit. It is, therefore, absolutely essential that a plan is developed as to when these things will be done. Otherwise, less important things will take the funds, the farm women will become prematurely old, and the youngsters lose their interest in the farm. I wish again to point out that, important as improving the soil may be, more important is the health, happiness, and well being of that farm family. And I have no hesitation in saying to this group that those of you who believe that income alone will bring satisfactory farm living are terribly wrong. It takes careful planning that must be tied with the over-all plans for the farm. We have tried it both ways. It works when the two are tied together; it doesn't work when they are not. We want the farm woman in Missouri to help with every step in the farm plan and her husband to help in every step in the home plan. This calls for real teamwork if it is going to succeed, at least in a state with the type of resources that Missouri has.

"This was well illustrated in two Balanced Farm planning training schools that were held for county agents and home agents in Southeast Missouri some years back. At the first school the county agents worked together on developing a practice farm plan on an actual farm while home agents worked on the home plan for the farm. Then each group presented their plan for the other's consideration. When the home agents presented the cost of home improvements needed, all the county agents whistled. They had not seen the need and they had not anticipated such expenditures in their plan for farm operations.

"Two years later a similar school was held with many of the same agents attending, but this time county agents and home agents worked together in groups to obtain an understanding of all phases of this farm planning job. This time when various groups of agents presented the plans they had developed, there was no whistling, even though plans for home improvements were even larger than before. The men agents knew the needs of the farm home and the women agents knew the income producing possibilities of the farm, and since both had worked together a very important balance had been reached - a balance between the farm and the home. And of course the importance of this family approach is not lessened when it is the farmer and his wife and older children working together on the plan." 10/

The Missouri Extension Service makes these points in giving its reasons for the family approach and a complete farm and home plan:

1. Farming is a family enterprise.
2. The plan affects all members of the family.
3. It creates mutual understanding.
4. Aids in money management.
5. Alerts the family to its critical financial period or periods.
6. Balances farm and family demands.
7. Educates younger members.
8. Provides activity outlets for all.
9. Unifies related aspects (social, economic, cultural) of family life.
10. Assures family service to the community and society.

DEVELOPMENTS DURING THE PERIOD 1946-1953

Work in Balanced Farming took on a new spurt in 1946 with the conclusion of numerous wartime emergency activities and the aid of increased federal funds. Additional assistant and associate agents were employed to expand farm and home planning activities.

Shortly after the arrival of this additional help, a new device was used for the first time to strengthen the farm and home development movement. It was the establishment of a Balanced Farming Association in 1946. Fifty farm

families banded together and paid in \$50 each; the businessmen of the community put in \$1250 and the Extension Service put in \$1250 to provide a \$5000 fund to hire an associate agent to help these 50 families set up Balanced Farming plans.

Missouri extension people say that this has been one of the most helpful devices that they have found to promote more sound farm and home planning. The pattern of contributions established in the first association has been followed for the most part in those associations that have followed. In some cases the farmer contributes \$75 instead of \$50, eliminating the need of businessmen's money. In 1947 there were 17 associations, 29 in 1948, 37 in 1949, and 40 in 1954.

The associations have had two main purposes: (1) they have been a means of securing additional funds for Balanced Farming Work, and (2) they have provided association members with moral support. It has been the experience of the members of the Extension Service that when a farm family puts in its own money to employ an associate agent who in turn helps it develop a farm and home plan, it is really ready to move. They say that people value things that they pay for with money or in work.

Support of Farm and Civic Organizations

The support of individual businessmen, farm and civic organizations for Balanced Farming has been exceptional. The State Bankers Association and the State Chamber of Commerce have adopted Balanced Farming as their agricultural program. The State Bankers Association (and its members) and the Federal Reserve Bank give serious consideration to Balanced Farming plans as a sound basis upon which to make loans. The Missouri Farmers Association, a large cooperative, is likewise a strong supporter. It has provided a large trailer displaying a soil testing laboratory and a Balanced Farming exhibit for the State and county fairs. Many county soil testing laboratories have been established and maintained through the cooperation of county farm bureaus. The Chambers of Commerce of St. Louis, St. Joseph, Kansas City and Springfield annually put on a Balanced Farming recognition program for farm families who have performed outstandingly in Balanced Farming Programs. Individual businessmen and business establishments have contributed funds toward Balanced Farming associations.

This support of local, county and state institutions and businessmen has not happened by accident. The Extension Service has followed certain guideposts in gaining this support. Some of the more important ones include:

1. Presenting Balanced Farming as a program that would help businessmen as well as farmers. The Balanced Farming Program means higher crop yields, and higher income for farmers. This in turn means more purchasing power and purchases from businessmen. On this basis then businessmen were asked to invest in Balanced Farming Associations rather than contribute. It was a matter of self-interest.

2. Pointing out to the State Bankers Association (and its members) and the Federal Reserve Bank that a Balanced Farming Plan represents a sound device and basis upon which to make loans to farmers.
3. Holding special tours or field days for businessmen so that they could see Balanced Farming in action.
4. Having businessmen serve on Balanced Farming Judging Committees.
5. Taking surveys of the members of Balanced Farming Associations to determine how their increased income was spent. This information was then used to gain additional support from local institutions and business people.

Progress in the New Effort

By the fall of 1947 thirteen thousand plans scattered throughout the state were partially in operation. Thirty Balanced Farming Associations with 1500 members were actively going ahead on Balanced Farming work. This number continued to grow and by the fall of 1951 twenty-three thousand one hundred and sixty-seven plans were in operation.

The Missouri Extension Service in its annual report for 1951 gave the following accomplishments as the result of "Ten Years of Balanced Farming". 11/

	<u>1941</u>	<u>1951</u>
Balanced Farm Plans in Operation	3	23,167
Total Fertilizer Used	68,626 tons	647,393 tons
Limestone Spread	1,566,990 tons	2,790,488 tons
Lespedeza	4,562,000 acres	9,937,750 acres
Sweet Clover	379,000 acres	856,000 acres
Soybeans and Cowpeas	549,000 acres	
Soybeans alone		1,330,000 acres
Ladino	None	225,000 acres
Other Legumes	878,000 acres	1,690,000 acres
Total Legume Acreage	1,368,000 acres	14,038,750 acres
New Terraces Built	48,293 miles	64,490 miles
Total Acreage Terraced	302,300 acres	905,885 acres
County Soil Testing Laboratories	None	72 labs
Soil Samples Tested by County Labs	None	69,939 samples
Pasture Renovation	None*	19,177
Fertilizer Bulk Plants in State	None	81
Dairy Cows Tested by Official D.H.I.A. Test	11,691	20,298
Farmers Purchasing Purebred Beef Bulls	4,238	11,345
Boars	4,498	13,853
Rams	4,661	4,235
Farmers Using Freezer Lockers	6,888	72,941 plus home freezers
4-H Club Members	20,509	35,282

* No comparable figures

A survey of 824 Balanced Farming operators in 20 counties in that same year (1951) showed a 92 percent beef calf crop which they weaned weighing 410 pounds. Seventy percent of the hog raisers used clean ground and raised an average of 7 pigs per litter.

Half of these Balanced Farming members had built an average of three miles of terraces per farm.

Twelve of the 824 operators had built new homes and 81 remodeled their old ones. Eighty-one percent had electricity; 77 percent had water under pressure in the house; and 74 percent had water in the bathroom. Forty of the farmers had put in central heating systems.

Other farm improvements on the 824 farms included 123 milking parlors, 20 new laying houses, 32 new silos, 89 movable hog houses, and 110 range shelters. A total of 253 of these 824 farmers had added new breeding stock to their herds.

During 1951 Balanced Farming field days and meetings had been held on 549 farms in 93 counties, attracting some 30,000 persons. Tours of 567 farms in 77 counties had been attended by 13,000 interested persons.

Balanced Farming had also been discussed in some of its phases at 42,809 other farm meetings in 104 counties and at 589 meetings with business and professional people. 12/

STATUS OF BALANCED FARMING - 1954

Organization and Functions of the Staff

Surprisingly there has been relatively little change in the structure of the State Extension Service in its shift from a project to a problem approach of program planning and implementation. The major changes in personnel are:

1. Farm Management (Balanced Farming specialists) have increased from one to four in number.)
2. An increase from one to four in the number of home management specialists.
3. An increase in agricultural engineers from two to five.
4. A large increase in the number of assistant and associate agents doing Balanced Farming work.

The Extension staff now includes the following personnel, all of whom are engaged in the Balanced Farming Program in one way or another:

Director and Assistant Director	2
State Leader of Home Demonstration Work	1
State Agents (Supervisors)	12
(6 men and 6 women)	
Subject Matter Specialists	38
Farm and Home Management Specialists	8
(4 men and 4 women)	
State 4-H Club Staff	7
Personnel of Information Office	6
County Agricultural Agents	114
Home Demonstration Agents	106
Assistant Home Demonstration Agents	6
Assistant and Associate County Agents	91

The chairman of the State Balanced Farming Committee, John Falloon, emphasizes six points in discussing "Organizing for Balanced Farming":

1. We in Missouri believe in this Balanced Farming approach and program - but we not trying to sell anyone on the exact way we do it.
2. Balanced Farming is a job for the entire staff.
3. The word "planning" also involves doing.
4. The planning process is definitely an educational process.
5. Is there a danger of superimposing a state program (Balanced Farming) on the farm people? Falloon states there is no danger of this or conflict with democratic procedures. Balanced Farming is a means of getting solutions to problems, a way of doing Extension work.
6. This program, as with all types of Extension programs, is carried out in the county by county Extension workers. The function of Extension people at the state level is to train and support the county staff.

Assuming that farm people are sold on the Balanced Farming idea, what is the job then? Falloon and his colleagues set forth the functions of the staff and the roles of different types of specialists as follows:

1. Planning Function

This is a fitting together of the various factors that make up the farm and home business. It is a planning for production and consumption on the farm and in the home. The task of Extension is teaching and guiding people to see what applies in their respective situations.

2. Putting the Plan Into Operation

13/ This is a proposition of putting first things first.

The Extension Service must make sure that facilities are available for putting the plans into operation.

3. Using Good Practices

This relates to what Extension has been doing in the past but generally in a piecemeal fashion. This function is a tying together, an integration one. As an illustration, it is decided in the plan that 1/4 of an acre is required to produce vegetables for the home. This decision in turn will soon involve the matter of good practices in insect control, fertility of the soil, canning, freezing, etc. Looked at in this way it is soon apparent where the individual production specialist fits into the picture.

In terms of using specialists, the planning function is one in which the farm and home management specialists take the lead. Subject matter specialists assist. However, when it comes to putting the plan into operation, the subject matter specialist assumes the lead. The proposition of recommending good practices is, of course, a function of the subject matter people. 13/

The State Balanced Farming Committee which has been mentioned briefly before is the key coordinating and clearing house device in the administrative arrangement for Balanced Farming. Meeting on an average of about once a month the committee considers current problems of a technical nature and makes recommendations to the Director of Extension. It is a rule that if a regular member of the committee cannot attend a scheduled meeting someone else must be present from his respective group.

The State Balanced Farming Committee is assisted in its work by five district Balanced Farming Committees. These districts correspond with the five administrative districts of the State Extension Service. These sub-committees tend to work on matters given to them by the state committee. Quite often they serve in an operational fashion, such as taking the leadership in planning and conducting a regional Balanced Farming field day.

In looking back Director Burch feels that the establishment and use of the State Balanced Farming Committee and its district sub-committees has been one of the most effective means that he has had at his disposal to build a real cooperative spirit and team concept in the Balanced Farming effort.

Other Aspects of the Organization

The supervision of specialists has not changed with the coming of Balanced Farming. They remain responsible to their department heads for subject matter and to the Director of Extension for administration.

13/ John Falloon. "Organization Functions of the Staff". Address before Central States Farm and Home Planning Conference, Columbia, Mo., June 25, 1954.

The role of the state Extension agent or supervisor has altered to some degree with the coming of Balanced Farming. He or she is expected to perform the (1) duties of a supervisor and (2) to act as a generalist in Balanced Farming. As a matter of fact everyone on the Extension staff is expected to be able to handle Balanced Farming problems skillfully.

In passing it might be mentioned that the state Extension agents work in pairs in Missouri. One man and one woman are paired off to handle a certain area of the state. Insofar as possible they attempt to arrange their schedules so that both visit a particular county at the same time.

At the county level, Extension administrators feel that the Balanced Farming approach has served to weld the county professional staff closer together. Normally weekly staff meetings are held with the County Agricultural Agent functioning as chairman. A committee concept is emphasized. A distinction is made by Missouri Extension people between a committee system and a county director system. A committee in Missouri is held responsible even though state policy calls for the County Agricultural Agent to be chairman. Observers say that the system is highly satisfactory.

Another change that has occurred in the last few years concerns a state advisory group of lay people. This development is not a result of Balanced Farming but does have an effect upon it. Nine years ago the Extension Service began a procedure of holding five district meetings in the state once a year. Key people from the county sponsoring organizations are invited, normally the chairman of the county sponsoring board, and the presidents of the 4-H and Home Economics county councils. An attempt is made to have one prominent businessman attend from each county. The agents also come to the sessions.

In these meetings farm problems and possible solutions are discussed at length. Each district group elects two men and two women to serve on a state Extension advisory committee. This provides a total of 20 people for the state committee. Twice a year, in June and January, this state committee meets at the college for a two-day session.

The state advisory committee works on problems that it feels the State Extension Service should stress if it is to be most useful to farm people of the state. For example, it has requested the Extension Service to concentrate on the following areas: (1) work on rural youth (2) more assistance in Balanced Farming (3) health and recreation (4) work in the field of public affairs. The committee has come to be a great coordinating device for the state Extension service.

The state program of the Extension Service is based on the county programs. The county programs are brought to the attention of the state advisory group in its January meeting.

As we have seen, the State Extension Service now operates on the problem approach to program planning and execution. Thus it is not strange to find four major problem committees at the state level: (1) one on Balanced Farming (2) one on public affairs (3) one on rural youth (4) and one on recreation and health.

Methods Used in Publicizing Balanced Farming

This report would be amiss if it failed to indicate the fine job that has been done in publicizing the Balanced Farming Program. Mr. E. B. Winner and his information assistants of the Extension Service have taken the lead in preparing newspaper, radio and TV material on Balanced Farming for use in the state.

During 1953 there were weekly mailing of clipsheets, special releases and pictures to dailies, and weekly releases by Extension Agents to an average of 4 newspapers per county. All newspapers received the Missouri Farm News Service and some 120 received mats regularly. Some 60 dailies and large weeklies were on the list for mimeographed news service. Pictures were sent regularly to 12-15 papers. Material from radio tapes was sent to county agents for their use in press releases. Personal newspaper columns continued to increase with a total of 115 agents using columns in 1953 compared to 87 the previous year.

Use of radio has continued to grow with county workers reporting more than 7300 radio broadcasts in 1953, many of them on Balanced Farming. By the end of 1953, 30 stations were making regular use of the tape recorded farm programs made at the college.

Television (TV) was the new mass media put to use by Missouri Extension workers in 1953. Beginning in January, a 15 minute weekly farm show, known as the "MU Farm Hour" has been presented over WDAF-TV, Kansas City, each Friday at noon. Also seven counties in the Springfield area are working together in the presentation of a 10 minute show each Monday and Thursday on KTTS-TV. All together five TV stations are now cooperating.

The agricultural information specialists have also had good success in gaining the cooperation of farm editors in publicizing Balanced Farming stories through information channels of newspapers, radio and TV. In many cases editors go out and get their own Balanced Farming stories. As Mr. Winner has said, "Once Balanced Farming gets started, we don't need to worry about publicity."

The Extension Service has used many other methods of publicizing the Balanced Farming Program. One of these has been the use of emblems such as ties, buttons, plaques, windshield stickers, folders and stamps with the Balanced Farming insignia. Exhibits at county and state fairs have been used extensively. The use of slides in the form of stories has been used very effectively. Two colored movies on Balanced Farming have been exceedingly helpful in presenting the story of Balanced Farming.

Pre-Service and In-Service Training of the Staff

The Missouri Extension Service considers it imperative to maintain a comprehensive pre-service and in-service training program for its agents and specialists doing Balanced Farming work. New assistant and associate agents are normally placed with an experienced agent for 60 days or more to learn Balanced Farming techniques.

The procedure in 1954 will illustrate the nature of the in-service training process. On April 1 and April 2, 1954, the entire college Extension staff met. At that time each project group (dairy, poultry, etc.) presented its ideas on:

1. Practices (in the project involved) to consider in setting up a Balanced Farming Plan.
2. The procedure to follow in setting up a plan to influence the above practice.
3. How to put these practices into operation on a farm as a part of a Balanced Farming system.

These individual presentations were then followed by group discussions culminating in the development of a "Balanced Farming Yardstick."

The State Training School was then followed by 2-3 day training sessions for the county Extension workers in each district of the state. While the contents of each program in the five districts varied slightly, the pattern was the same. As an illustration, the program for the South Central District of the state consisted of the following:

First Day

Introduction and Purpose
Visit to farm with good plan
Discussion of farm plan

Second Day

Discussion - how to make up a Balanced Farm prospect list.
How to approach a prospective Balanced Farming family and
how to get the family to work together to work out a
Balanced Farming plan.
Panel - How can agents work together to get more Balanced
Farming done.
Visit farm and discuss a Balanced Farming plan for the farm.

Third Day

How 4-H ties in with Balanced Farming
Good publicity for Balanced Farming
Balanced Farming yardstick
Summary

Problems of Balanced Farming

While it is commonly agreed that Balanced Farming has made great strides in Missouri, it should not be construed that this trail blazing effort has been entirely smooth sailing. There have been numerous problems to solve. Some of these problems have been problems at the administrative level while

others have been purely technical in nature. Many have been solved while others still require attention from time to time.

Some of the problems that Director Burch and his staff have encountered in the course of this program are set forth below without regard to priority or relative importance.

1. The problem of definition and concept of Balanced Farming. In the beginning this was a problem of getting a meeting of minds within the Extension staff. At the farm and home level it is a continuing proposition of trying to make clear to the farmer and his wife the meaning of Balanced Farming.
2. The problem of esprit de corps and gaining the active support and cooperation of all the staff members in a coordinated team effort. This is closely related to the question "where should responsibility for farm and home planning rest"? In Farm Management Department? etc. 14/
3. The problem of resources. Time, quantity and quality of personnel, technical information, and facilities that can be used to promote a farm and home planning program. As we have seen, the problem of adequate funds has been a basic one, and one that in turn solves or tends to aggravate other problems. Some of the major problems in this area have included:
 - a. A shortage of trained personnel to do the job.
 - b. The relatively large turnover of associate agents and home agents.
 - c. Facilities and services for implementing plans on farms have been limited or non-existent in some counties such as trained custom water management constructors, custom fertilizer applicators, field choppers, etc.
 - d. Limited farm credit of the proper type in some instances.
 - e. The problem of time. Extension people are busy people. The matter of time and its organization.
 - f. The problem of research. The reporting of agricultural input-output data and cost price data, for instance, tends to be for limited levels of inputs and short range time spans. Research in home economics is badly needed.
4. The problem of publicity and public relations. In the early days there was a tendency to emphasize expenditures without telling the full story on the results in newspaper reporting.

14/ Out-of-state people who attended the Central States Farm and Home Planning Conference in Columbia, Mo., June 22-24, 1954, were tremendously impressed with the team spirit of Missouri Extension workers.

5. The problem of tradition. In some areas of the state, such as the heavy cotton producing areas of Southeast Missouri, it has been particularly difficult to get people to change from old practices.
6. The Technical Problems of Farm and Home Development.
 - a. How do you interest a family in Balanced Farming?
 - b. The question of service versus education.
Extension workers can plan for and then sell the plan to farm families versus teach and guide farm families to plan for themselves. Some Missouri Extension workers feel that there has been a tendency for Extension to do too much of the planning. Other Extension workers, particularly the Farm Management specialists, say that this is not true.
 - c. How long does Extension stay with a farm family in its Balanced Farming Program? The problem of follow-up. Also the problem of membership turnover in Balanced Farming rings.
 - d. The problem of moving faster in doing Balanced Farming work.
In recent years there has been a trend to doing more of the educational job in group situations. The Director and his staff feel that there must be much more of a shift in this direction from the individual approach to doing Balanced Farming work.
 - e. What time span is to be considered and how much detail is to be included in plans?
 - f. Is the concept of evaluating alternatives and a budget to be included?
 - g. The problem of integrating more completely the traditional home demonstration approach (through clubs) in the Balanced Farming Movement. 15/

Accomplishments to Date

Since the inception of the Missouri Balanced Farming Program, the number of families participating has continued to increase with the total now being more than 25,000. There is no way of measuring all the impacts and influences of this program, but it is evident through surveys and case stories that the program has made a sizable contribution to Missouri agriculture.

BALANCED FARMING AT THE COUNTY LEVEL - A CASE STORY

The Background 16/

Balanced Farming, like all Extension Work, is done within the counties by county Extension workers. Therefore, in order to pinpoint the Balanced Farming effort, let us take a brief look at a typical county situation in Southwest

15/ The author is indebted to Dr. Dorris Brown of North Carolina State for his analysis of farm and home planning problems. See Journal of Farm Economics, May, 1951. "Problems of a Farm and Home Planning Program."

16/ "County Rural Program". Polk County, Bolivar, Missouri, 1954.

Missouri, Polk County. Polk County is a border Ozark county with gently rolling upland fields and many narrow valleys.

There are 2,922 farms in the county with 376,333 acres, or an average of 130 acres per farm. The average commercial farm is valued at \$7,367, or an average of \$48 per acre. Eighty-seven percent of the farm land is operated by owners and 13 percent operated by tenants.

There are 160,000 acres in crop land with 55,900 in hay crops cut for hay. There are usually 7,000 acres of clover, timothy and other grass, 5,000 acres of alfalfa, and 29,000 acres of Korean lespedeza cut for hay.

There are 17,000 acres of corn grown with a 10 year average yield (1940-1950) of 25 bushels per acre. The average yield per acre now is 42 bushels due to heavier soil treatments, better varieties and cultural practices.

There are 11,000 to 12,000 acres of wheat with a 10 year average yield (1940-1950) of 15 bushels per acre. The average yield at present is 18 bushels per acre.

Twenty-six thousand acres of oats are grown with a 10 year average yield of 23 bushels per acre (1940-1950). Now, the average yield is 28 bushels per acre.

Five thousand acres of soybeans are grown with a 10 year average yield of 12 bushels per acre. The average yield in recent years is 17 bushels per acre.

The People

There are 16,000 people in the county. Most of their immediate ancestors came from Virginia, Kentucky and Tennessee. They are mostly of British, Irish, German and Bohemian descent.

The Climate

The annual rainfall varies from 25 to 55 inches with an average of 42 inches. The growing season is 200 days for most crops. The last killing frost in the spring comes about April 15th with the first killing frost in the fall about October 25th.

Farm Equipment and Improvements

There is considerable money invested in farm equipment and home improvements. There are 1,118 telephones on the 2,922 farms in the county. This compares with 1,506 in 1945.

Two thousand seven hundred and sixteen farms, or 95% have electricity with an average electric bill of \$6.00 per month for 170 KWH per farm.

There are 913 tractors on 834 farms. Other equipment includes 1,929 automobiles and 738 trucks on farms, 75 corn pickers and 168 power pick-up balers, 100 upright silos and 835 trench silos.

Sources of Income

The total income in Polk County is \$15,000,000 per year. 55%, or \$8,195,865 comes from farm income as follows:

37%	Beef, hogs, sheep and dairy cattle	\$2,913,729.00
32%	Dairy products	2,600,000.00
20%	Poultry and poultry products	<u>1,672,393.00</u>
88%	Total livestock, dairy and poultry income	\$7,186,122.00

Other cash farm income:

3 %	Wheat	\$ 335,000.00
2 %	Oats and barley	162,200.00
2 %	Corn	61,000.00
0.6%	Hay	52,000.00
0.3%	Forest products	20,000.00
<u>4 %</u>	<u>Other farm income</u>	<u>379,643.00</u>
12%	Other cash farm income	\$1,009,843.00
100%	Total farm income	\$8,195,965.00

Objectives of the Rural Program of the County

The long time objectives of the people and those with whom they work is to make the FARM, the HOME, and the COMMUNITY a more satisfactory place to live by:

1. Conserving and building the soil.
2. Producing, preserving and utilizing a balanced feed supply.
3. Increasing net income from dairy cattle, other livestock and poultry.
4. Securing better health for the rural family.
5. Building a good home for richer family living.
6. Developing a wholesome neighborhood and community life.

Rural Problems

The major rural problems of Polk County are:

1. The need for conservation and better use of the land and the water.
2. The need for the production, conservation and wise use of a balanced feed supply.
3. The need for increasing net income from dairy cattle and other livestock and poultry.
4. The need for better health for rural and city families.
5. The need for home improvements.
6. The need for neighborhood and community cooperation.
7. The need for greater opportunities for developing young people.

The County Extension Organization and Program Planning

The county is organized to carry on Extension work in an orthodox manner for Missouri. The sponsoring organization is the Polk County Agricultural Extension Association. Its Board of Directors, or an executive committee of the Board, meets at periodic intervals to receive reports of the agents and to handle business matters of the Association. Other groups within the county which play leading parts in the Extension program include the 4-H Council, the Home Economics Council, and the Dairy Herd Improvement Association. In addition, there is a Balanced Farming Sub-committee of the Board of Directors of the sponsoring association which guides the county Extension workers in Balanced Farming work.

Program planning and implementation is conducted in Polk County in the same fashion as in other counties of the state. This process was described earlier.

The Development of Balanced Farming

Balanced Farming in Polk County began in 1941 with the arrival of county agent R. W. Kallenbach. The plan called for the establishment of one Balanced Farming demonstration in each of the 107 school districts of the county. The emergency work of the war years delayed the implementation of this plan.

Initial farm planning work was conducted on an individual approach basis by the county agent until 1949. 17/ By this time there were 38 Balanced Farming cooperators, each requiring 3-4 days per year of the agent's time.

Kallenbach came to the conclusion that the program must move ahead faster, and that the only way that this could be done was through using a group approach in teaching Balanced Farming or getting an associate agent to work full time on Balanced Farming. 18/ Since there were no funds for another agent, there was no alternative except to try working through groups of 5-6 families each to expedite the Balanced Farming effort.

Miss Rowena Paschall, the Home Demonstration Agent, who had arrived in 1948, worked with Kallenbach in determining the keystones to govern their Balanced Farming work. They decided that the work objective should be "A minimum of paper work and a maximum of action on the part of the farm family.

17/ There is one exception. In 1941 Kallenbach ran a 10-day school on Balanced Farming for 38 young people. However, this turned out to be too large a group. Kallenbach did not consider the school too successful.

18/ As mentioned earlier, most of the Balanced Farming in Missouri thus far has been done on an individual farm basis. The employment of assistant and associate agents devoting full time to farm and home planning has permitted substantial progress with this approach in the Balanced Farming effort. However, the procedure in Polk County represents a more extensive approach to farm and home planning and an effort to speed up the movement.

A minimum of agent's time - with the farmer and his family doing most of the work on the plan. And finally, there should be a minimum amount of direction from the agents, and a maximum amount of understanding, enthusiasm and leadership on the part of the farmer and his family".

In line with this objective, the county Extension workers went ahead to simplify their previous procedures and the prepared material that the college had issued. 19/ Step one was to develop a simplified Balanced Farming worksheet and Family Living Plan. Ed. Crosby and Jack Rogers of the College staff worked with Kallenbach on the farm worksheet, and college home demonstration specialists worked with Miss Rena Jenkins, the District Agent, and Miss Paschall on the family living plan.

Step two was to establish the procedures of working with groups and step three to put their new approach into operation.

The new approach worked out well in the opinion of the Extension agents. They found that the group system enabled them to reach many more people, and it tended to insure an educational rather than a service approach to doing Balanced Farming work.

By the spring of 1954 the two agents had 146 cooperators in the Balanced Farming program and were anxiously looking forward to the coming of an additional agent on July 1, 1954 to speed the effort. 20/

The Planning Process

The planning procedure initiated by Mr. Kallenbach and Miss Paschall has been modified to some extent since the beginning. Briefly, it consists of the following operations: First of all, the 5-6 cooperating families in each group are familiarized with the meaning of Balanced Farming and what the development of a Balanced Farming plan involves. They are told that the development of a Balanced Farming plan involves the following steps:

1. Analyze the present farming system to detect each weakness.
2. Plan a revised farm layout and cropping system.
3. Determine the livestock enterprises for the revised system.
4. Complete the details of revised cropping systems, soil treatments and other practices needed for full efficiency.
5. Prepare livestock management calendar.
6. Prepare revised farmstead layout map.
7. Make a complete family living plan.
 - a. Family food requirements and production.
 - b. Family clothing requirements.
 - c. Rearrangement of house for more efficient living.
 - d. Budget family living costs including education, health, recreation, church, community, etc.

19/ The College had prepared a comprehensive Balanced Farming workbook and Balanced Farming Handbook which were and are used in most counties of the State.

20/ It should be mentioned that the two agents had had an assistant agent to help on Balanced Farming for a part of this time.

8. Summarize farm and home improvements planned and credit needed.

Then the county agent, the home demonstration agent and the members of the group decide on how they will organize to get the job done. The usual pattern is to meet once a week or once every two weeks during the months of January and February. Generally these meetings are held in the homes of the farm families because the Extension agents have found that this atmosphere is more effective than a formal meeting place, such as a school, for teaching the fundamentals of Balanced Farming.

The planning procedure generally consists of four weekly meetings with both men and women in attendance. Farm maps are drawn by the farm family before the first meeting. Some of the details of this procedure are:

The first meeting involves the determination of family goals, mapping and planning the cropping system and checking the pasture and hay balance sheet with the livestock to be carried on the farm. The cooperators are also shown how to take soil samples, how to mix them and record them on their Balanced Farming maps.

At the second meeting the folks are given training on how to interpret soil tests and how to determine the most economical soil treatments to use on their farms. They are also taught how to use the Balanced Farming Handbook.

At the third meeting a livestock efficiency balance sheet is used to determine the amount of livestock needed to balance feed supplies, labor available and to make enough net income for family living, and farm home improvements. Increasing profits through better livestock practices and better markets are carefully studied as it applies to the individual farms.

At the fourth meeting the production and conservation of the family food supply is studied and garden plans and small fruit production plans are made.

Colored slides taken in the county are shown at each of the four meetings to show what other Balanced Farming cooperators have accomplished in their work.

As soon as the four group meetings are completed, the county agent visits the farm of each cooperator to assist the farm family in planning the water management system, the farmstead plan, sewage disposal, and the water system for the farm and home. Farm record keeping and financing the farm business are also discussed at this time. Likewise the matter of finding better markets and securing higher quality farm products is considered.

The follow-up work of the home agent consists of visits to the farm home to assist in planning home lighting, food and clothing storage, kitchen arrangement, yard improvement, and food preservation plans. 21/

21/ See Appendix C "Suggested Outline - Balanced Farming School" prepared by the college for a more intensive approach to the planning process.

Accomplishments

The Balanced Farming Program has been successful in Polk County as elsewhere in the State in getting people to change to new improved practices. A survey of 89 cooperating families in 1949 revealed the following number utilizing improved practices:

	<u>No. farmers</u>	<u>Amount</u>
Sowed sweet clover	87	1305 acres
Sowed alfalfa	58	559 "
Plowed under sweet clover	14	217 "
Plowed under other legumes	49	559 "
Built terraces	35	539 "
Mixed fertilizers used	84	346 tons
Ammonium nitrate used	21	6.6 tons
Spread lime	70	3402 tons
Complete soil tests made	89	620 samples
Raised hogs on clean ground	28	7.5 pigs per litter
Raised chickens on range	49	
Farm ponds made	10	

Farm and Home Improvements

	<u>Prior 1949</u>	<u>In 1949</u>
	<u>No.</u>	<u>No.</u>
Installed electricity in home	69	11
Pressure water system in home	35	21
Bathroom and septic tank	14	24
Mechanical refrigeration	55	21
Adequate storage space in home	21	11
Utility room	7	7
Central heating system	7	3
Milking parlor	21	14
Silo	28	7
Range shelters	7	7

The Future

According to Mr. Kallenbach and Miss Paschall, the primary problem of doing Balanced Farming work in Polk County has been the lack of time, or put another way, lack of personnel. The arrival of an assistant agent on July 1, 1954 to work full time on Balanced Farming has corrected this situation considerably. The services of the new agent have been made possible by a special appropriation of \$1,150 from the county court, and a contribution of \$350 from the Bolivar Chamber of Commerce. The balance of his salary comes from the state.

Plans for the future call for the new agent to work with 85-100 families in small group situations. Probably there will be a charge of \$10 for each cooperating family to help meet the expenses of the Balanced Farming effort. With the assistance of the new extension agent Polk County hopes to move ahead at an increased tempo on the Balanced Farming Program.

THE GRASS ROOTS LEVEL

(Case stories of two Balanced Farming Cooperators)

What does Balanced Farming really mean to the farmer and his family? Is this an approach that gets results at the grass roots level, or is it simply another activity? A rapid review of two situations will give the answer. Fictitious names have been used to protect the identity of the actual families.

The first case story is a story of a young farmer and his family who joined the Balanced Farming movement in 1949. Many things have been accomplished since that time and many more remain to be accomplished. It is a situation which illustrates the Balanced Farming process in a dramatic fashion.

The second case story deals with a farm family whose members have been Balanced Farming cooperators since 1944. The program is much further along than in the first case.

Case I - The Norman Smith Farm and Family - Polk County, Missouri

Mr. Smith and Mrs. Smith are young farm people in their early thirties. They have two daughters, one 8 years of age, the other 3. Both Mr. and Mrs. Smith have had the advantage of a high school education and one year at college. While Mr. Smith is the son of a farmer, Mrs. Smith lived in town before her marriage. Both parents are active in community affairs, such as the church, Parent Teachers Association, and the Extension Service.

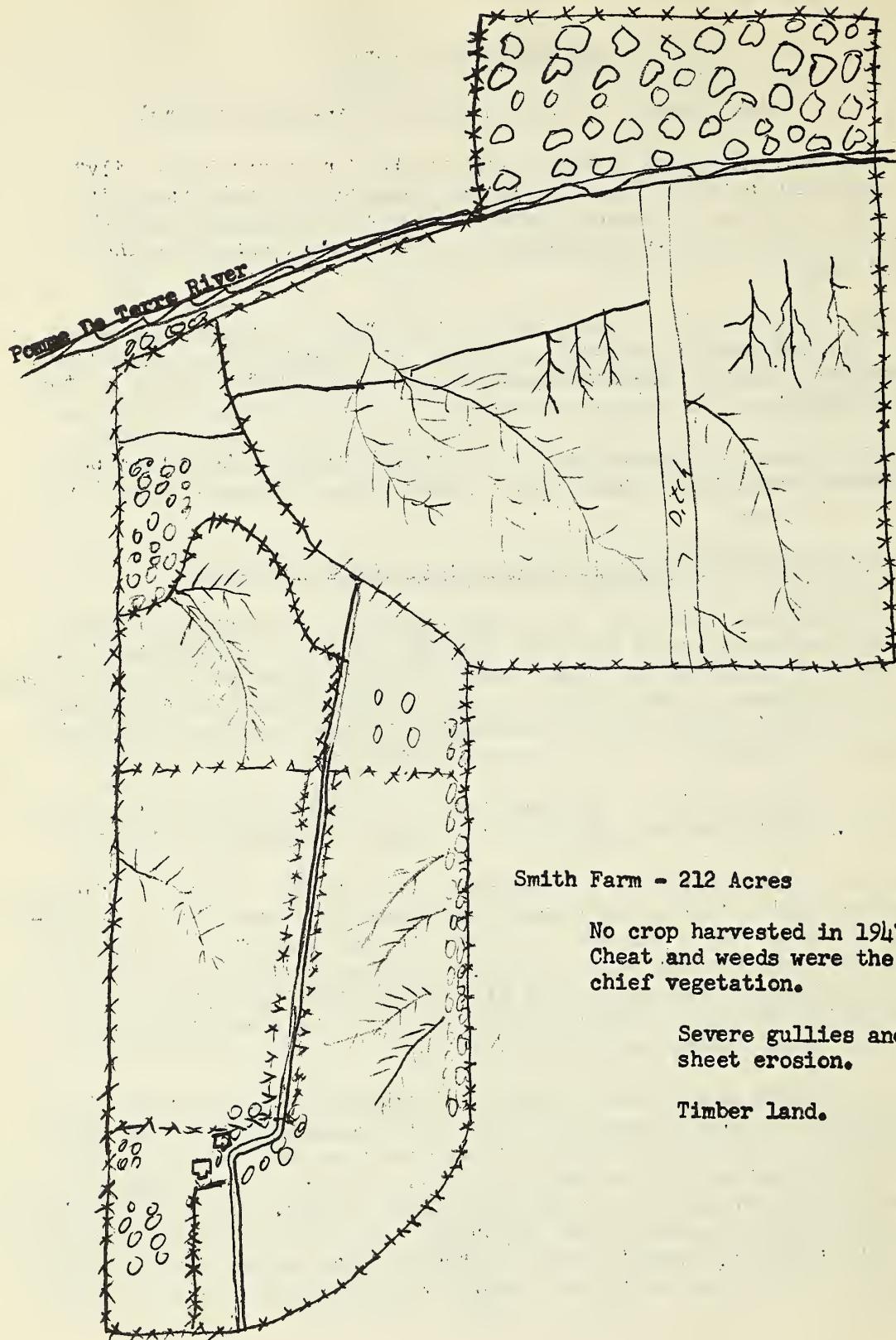
In 1947 Mr. Smith bought a 212 acre dairy farm and farm home, at a cost of \$42 per acre. Both the farm and the home needed considerable attention.

One hundred thirty acres of the 212 were cultivable. Many of the fields of the farm were badly eroded and needed immediate water management consideration. Fields tended to be run down in fertility and there was a lack of an adequate water supply for the cows. The farm and home buildings were in a poor state of repair. There was a lack of running water in the home, lack of cupboards in the kitchen, lack of a bath and many other deficiencies in the eyes of the young farmer and his wife.

In 1949 Mr. Smith and his wife joined a Balanced Farming group of five families, and with the aid of the county agent and home demonstration agent developed their own farm and home plan. They have now been in the process of putting their plan into action for four years. The severe droughts of 1952 and 1953 forced them to sell their herd of 30 cows in 1953. Twenty-six heifers are now being brought into production gradually. The present practice on the farm is to grow about 40 acres of corn and other silage crops, 35-40 acres of barley and wheat, and 25 acres of hay crops. Sixty acres are kept in permanent pasture.

The Farm Layout in 1947 "Before" Balanced Farming

30

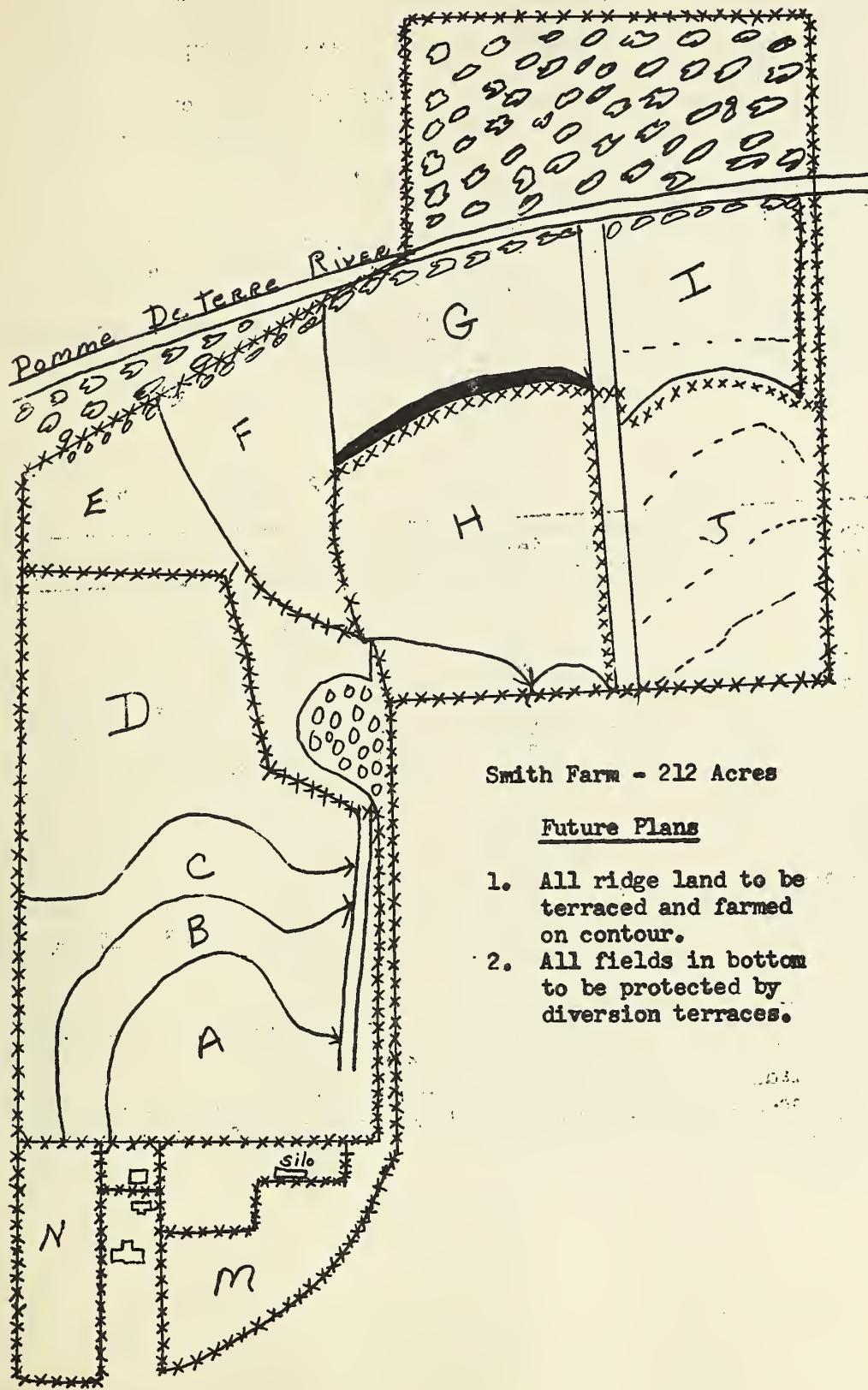


Smith Farm - 212 Acres

No crop harvested in 1947.
Cheat and weeds were the
chief vegetation.

Severe gullies and
sheet erosion.

Timber land.



Some of the Results

1. 60 acres of the farm are now being farmed on the contour. Diversion terraces and ditches have been built.
2. All fields have been soil tested and are now receiving appropriate fertilizer treatments.
3. Installed an irrigation system in 1953 which will water 75 acres of bottomland and remove many of the hazards of future drought conditions.
4. Built a new milk barn and installed new equipment.
5. Constructed a trench silo.
6. Improvements and additions in the home have been extensive. They include: running water in the kitchen, installation of cupboards in kitchen, addition of new windows, new concrete porch, new staircase, bathroom gradually being added, gradual replacement of old roof, partial construction of new rock foundation for home, new sewing machine, new TV set, and renovation of driveway to the home.

Crops Produced

	1948		1951		1952		1953	
	Acres	Yield/A	Acres	Yield/A	Acres	Yield/A	Acres	Yield/A
Oats	20	20	16	35	21	30	21	*
Lespedeza	20	1 T	16	1 T	21	1 T		
Barley	18	35	20	26				
Wheat	15	15					35	15
Corn (Silage)	18	6 T	12	9 T	28	12 T	43	3 T
Corn (Grain)	4	40	23	80	12	60 bu.	12	*
Sudan	10	*	3	*	10	*		
Small Gr. - Lesp.	20	*	8	*				
Soybeans-alfalfa	4	1 T						
Red Top			6	1-2/3 T				
Perm. Pasture(Orch.Gr-Ladino)			17(1)	*	36	*	8	*
" " " "			20	*	20	*	23	1T hay
Oats)			10	40 bu.				
Sweet Clover)								

* Pastured (Pastures largely killed by drought after 1952)

- (1) 13 acres orchard grass-ladino pasture returned \$126 per acre through milk.
4 acres of orchard grass-ladino pasture, carried 44 head of hogs and no supplement was fed.

Milk Production

<u>Year</u>	<u>Total Milk</u>	<u>No. Cows</u>	<u>Lbs. per cow</u>	<u>Milk Income</u>
1948				\$2931
1949				3204
1950	188,634	24	7860	6843
1951	203,000	25	8120	8021
1952	227,507	24.5	9286	9408
1953	62,228	24.5	2540	3253

* Sold cows May 1

Other Income

<u>Year</u>	<u>Hogs</u>	<u>Cattle</u>	
1948	\$1793	\$2046	
1949	1609	703	
1950	1886	1832	
1951	1550	1875	
1952		2084	
1953		8656	
	Total Cash <u>Receipts</u>	Total Cash <u>Expenses</u>	Net Cash <u>Receipts</u>
1948	\$ 8,778.00	\$4,947.00	\$3,831.00
1949	7,429.00	5,109.00	2,320.00
1950	10,945.00	6,058.00	4,887.00
1951	12,106.00	8,820.00	3,286.00
1952	13,990.00	10,262.00	3,728.00
1953	11,073.00	8,154.00	2,919.00

Net Worth

	<u>Total Assets</u>	<u>Total Liabilities</u>	<u>Net Worth</u>
1948	\$21,406.00	\$ 12,376.00	\$ 9,030.00
1949	27,109.00	18,921.00	8,187.00
1950	26,722.00	17,488.00	9,233.00
1951	28,000.00	16,000.00	12,000.00
1952	25,700.00	11,000.00	14,700.00
1953	31,500.00	14,000.00	17,500.00
1954*	35,600.00	12,600.00	23,000.00

* Estimated as of October 1, 1954

Net Worth (Continued)

	<u>Farm Improvements</u>	<u>Home Improvements</u>	<u>Total</u>
1948	\$ 320.00		\$ 320.00
1949	4,450.00		4,450.00
1950	1,240.00		1,240.00
1951	1,795.00	\$ 1,500.00	3,295.00
1952	800.00	200.00	1,000.00
1953	1,260.00	200.00	1,460.00

Plans for the Future

Mr. and Mrs. Smith have plans to :

1. Stay in the dairy business and build up a high quality herd of 25-30 cows. They plan to supplement the income from this source with the addition of a number of pigs.
2. Build a new barn for the cows and tear down the old one.
3. Continue fertilizer treatments in accordance with tests to build up the fertility of the farm.
4. Complete the renovation of the house by : installing new electrical wiring, complete the rock foundation work on the outside of the house, complete the fixtures in the bathroom, install gas heat, add a new gas stove, home freezer, hot water, new floors, new living room sofa, complete papering and painting of house, add shrubs and flowers to yard, and add front porch to house.

Mr. Smith reports that this farm which was bought for \$42 per acre in 1947 can now be sold in the neighborhood of \$140 per acre.

Case II - The Robert Jones Farm and Family - Lawrence County, Missouri

This is a story of a Balanced Farming system developed on a 120 acre dairy farm in Southwest Missouri since 1944. Forty acres more were added in 1951. It is a story of the farm, of the problems encountered in getting started, and of the family.

The Situation

Several years ago, the Robert Jones family faced a situation similar to that confronting thousands of other Missouri farm families who have planned and developed Balanced Farming systems. The farm land was thinner and rockier and their financial resources far more limited than many others possessed. But they had one thing in common - an ambition and a determination to improve the farm and develop a profitable farm business which would provide a better living, more opportunities and brighter future for themselves and their four children, two boys and two girls.

How they met these problems and made their decisions are best told in their own words.

"On the start we rented our farm. It was pretty well covered with grass and looked as if it might produce quite a lot, so we decided to buy. We didn't expect to buy any real bargain but we thought we had more of a bargain than we really got.

"When we started to plow we found that all that grass was just something to hide the many rocks and dew berries. Then as time went on the wild asters came and instead of grass we had what looked like a fine crop of weeds. We still weren't discouraged, but we knew we had to do something and do it quick if we were going to pay off the mortgage. No, we didn't have all the money needed to buy the farm. We had most of our machinery and livestock and that was mortgaged along with the farm to make the purchase.

"After one year's cropping we knew for certain that we didn't have much of a farm. But the Farmers Home Administration Supervisor and the County Extension Agent approached us with starting a Balanced Farm and Home Plan on the farm. We were wary of something so new but anything, yes, anything that might pull us out was welcome. Anything that could help build our farm into the home we wanted brought about a stir in our hearts and we listened as these men discussed how, by following a Balanced Farm and Home Plan, we could increase our crop yields, stop the ruinous erosion, earn more cash, educate our four children, gain security for old age, and still be workers in the neighborhood and community.

"We were willing to listen but we weren't ready to bite. Not just yet. We talked day and night within the family. Shall we try it? Can Balanced Farming really produce near miracles? We didn't want to be suckers, but the more we talked about this new way of planning and organizing the farm business, the more we felt such a plan as Balanced Farming could succeed. So we accepted.

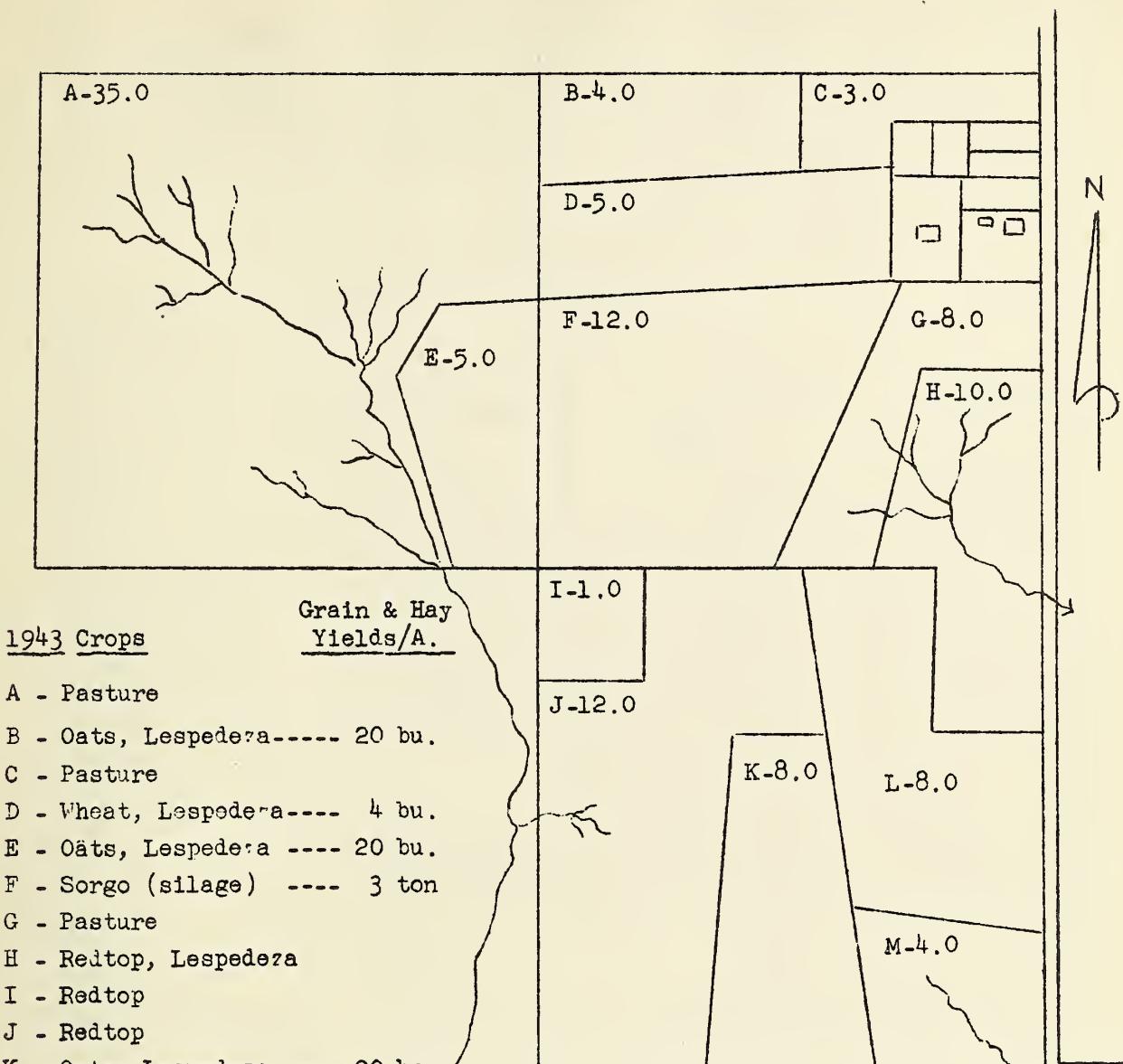
"Usually people jump to accept a gift, but we had to study the plan through before we could be sure it was a gift. People had talked before. This time we were glad we said "yes".

"We felt that the soil was the foundation of any farm. We wondered if we had any after the first year's yield but we decided to save what we had and try to improve what we could save. To save our soil we had the county Extension agent plan the farm for waterways and terraces. We planned soil building rotations - rotations that would include legumes plowed under and a grazing of most of the crops. Sweet clover was a must as a green manure. We needed rye for fall and spring pasture, and Sudan for summer pasture. Our income must come from milk and the more milk we had for sale the more income we would have. We sure thought we were putting on lots of fertilizer the first year or two, but now as we look back we didn't put on nearly enough. We are putting more on every year and it always pays.

"We were sold on the advantages of Balanced Farming but we had to have a place to live too. The old house was in bad shape. It could be worked over but that took money. Everything seemed to cost. The fertilizer cost, the

waterways and terraces cost. Improved varieties of seed cost. Artificial insemination cost. Our expenses the first year were more than we had every originally planned. But, you know the thing we didn't realize until we finished the year off was that these things we had done that seemed to cost so much were actually the most paying practices on the farm. When we saw how they were paying off, we realized the home could be fixed up immediately to make it more livable and we could pay for it from our increased earnings."

THE FARM LAYOUT - "BEFORE" BALANCED FARMING



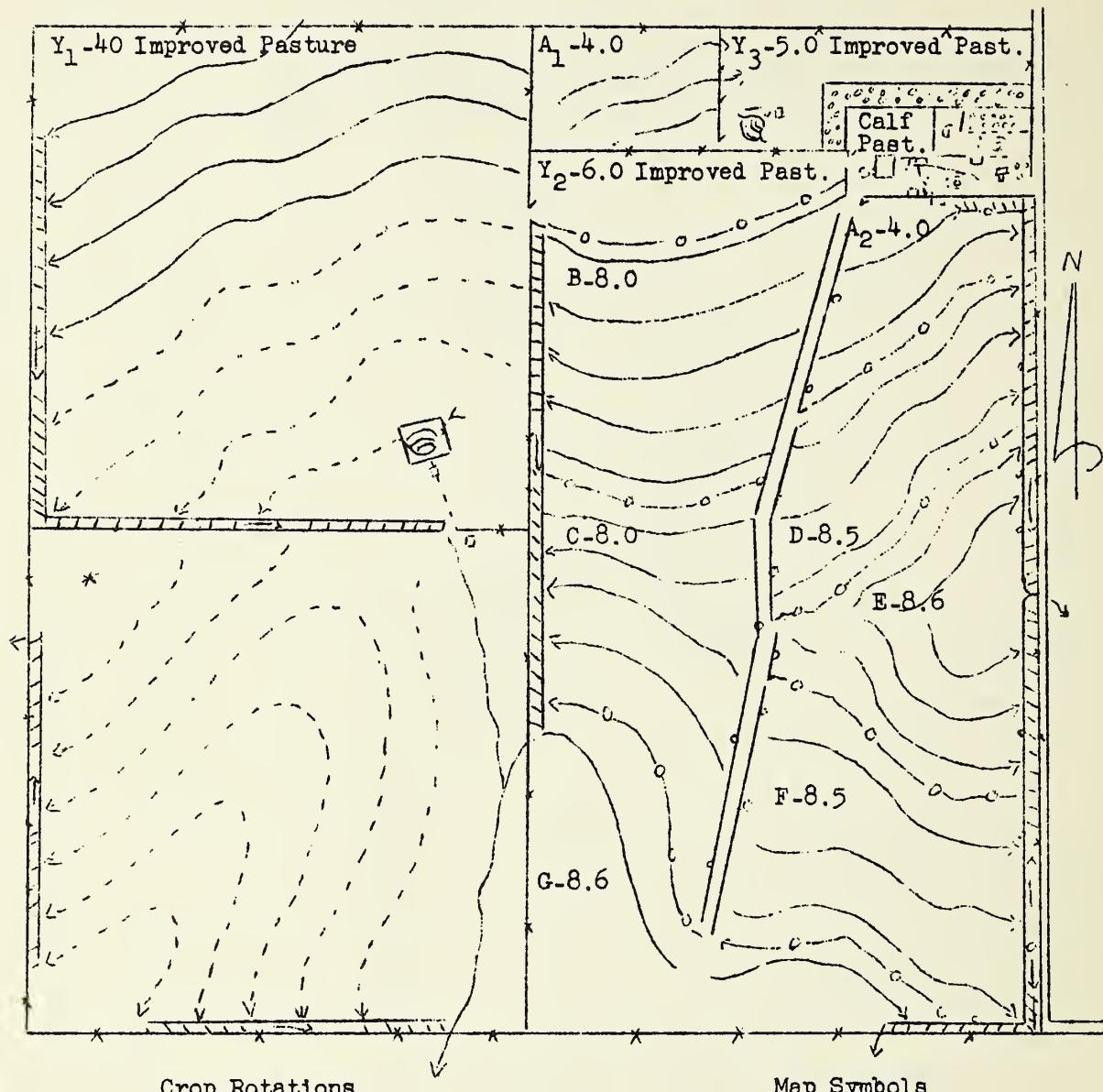
Total milk production - - 50,866#

Milk production / cow - - 3,633#

1943 Livestock

Dairy cows	- - - - -	14
" heifers	- - - - -	3
" calves	- - - - -	9
" bull	- - - - -	1
Ewes	- - - - -	15
Sows	- - - - -	1
Hens	- - - - -	85

FARM LAYOUT - BALANCED FARMING PLAN



Crop Rotations

- 2-yr.-A₁ & A₂-8.0 - S.clo. \rightarrow Sorgo(silage)
C -8.0 - Rye / s.clo. (past.)
- 2-yr.---- D -8.5 - S.clo. \rightarrow Sudan(past.)
E -8.6 - Barley / s.clo.(past.)
- 1-yr.---- F -8.5 - Oats(Grain)/ Lesp.(past.)
- 1-yr.---- G -8.6 " " " "
B -8.0 - Alfalfa - (hay)
Y -51.0- Improved Pasture

Map Symbols

- terrace outlets
---- terrace
---- pond
---- trees
---- woven wire fence
---- electric fence
---- barn and silo
---- milking parlor
---- house

*This 40 acres purchased in 1951.
Information on crop use not available.

The Results

CROP YIELDS

	<u>1943</u>	<u>1950</u>	<u>1953*</u>
Oats Grain	20 bu. per acre	58 bu. per acre	46 bu. per acre
Sorgo Silage	3 ton " "	9½ ton " "	9 ton " "
Soybean & Lespedeza Hay .	½ " . " "	None	None
Alfalfa Hay	None	2½ ton per acre	4½ ton per acre
Wheat	5 bu. per acre	None	26 bu. " "
Barley	None	25 bu. per acre	41 bu. " "

* 1952 and 1953 were drought years.

MILK PRODUCTION:

	Total Pounds <u>Milk Produced</u>	# Milk Per Cow	Milk Income
1944	65,565	3,800	\$ 2,076.11
1945	104,015	5,200	3,605.44
1946	89,308	4,950	3,878.04
1947	104,998	7,266	4,942.20
1948	138,742	8,376	8,130.20
1949	118,860	8,107	5,429.23
1950	191,700	10,045	6,200.45
1951	163,961	8,198	8,337.04
1952	159,846	7,430.5	8,441.94
1953	147,785	7,389	7,034.11

OTHER PRODUCTION:

	Income from Dairy <u>Cattle Sold</u>	Income from <u>Eggs Sold</u>	Income from <u>Poultry Sold</u>
1944	\$ 137.87	\$ 265.10	\$ 121.80
1945	282.44	431.71	119.02
1946	189.69	514.57	131.72
1947	427.58	679.46	223.10
1948	525.43	428.34	133.88
1949	2,652.38	948.54	43.77
1950	514.97	586.90	268.79
1951	1,221.16	663.45	54.29
1952	726.82	559.34	175.44
1953	582.20	85.07	None

CASH INCOME :

	<u>Total Cash Receipts</u>	<u>Total Cash Expenses</u>	<u>Net Cash Receipts</u>
1944	\$ 3,038.01	\$ 1,617.69	\$ 1,420.32
1945	4,739.46	2,172.25	2,567.21
1946	4,896.21	2,086.75	2,809.46
1947	6,582.75	2,762.01	3,820.74
1948	9,333.71	4,029.37	5,304.34
1949	9,120.47	4,600.84	4,519.63
1950	10,766.00	4,456.97	6,309.03
1951	11,664.58	5,890.58	5,774.00
1952	11,416.33	7,038.30	4,378.03
1953	8,947.24	5,557.65	3,389.59

NET WORTH :

	<u>Total Assets</u>	<u>Total Liabilities</u>	<u>Net Worth *</u>
Jan. 1, 1944	\$ 9,026.05	\$ 6,065.00	\$ 2,961.05
Jan. 1, 1945	9,545.39	5,335.60	4,209.79
Jan. 1, 1946	11,142.84	5,452.11	5,690.73
Jan. 1, 1947	11,293.33	5,492.11	5,851.22
Jan. 1, 1948	14,381.16	4,800.62	9,580.54
Jan. 1, 1949	17,470.80	4,550.62	12,919.88
Jan. 1, 1950	18,896.52	3,322.55	16,573.97
Jan. 1, 1951	21,923.82	5,622.55	16,301.27
Jan. 1, 1952	28,021.98	7,222.55	20,799.43
Jan. 1, 1953	28,377.00	6,031.05	22,346.00

* The figures in this column are quite conservative because of the very low inventory values on dairy cattle. For example, 14 high producing dairy cows inventoried at \$710.00 on January 1, 1949.

On this farm, as well as most others, considerable investment of capital in farm and home improvements was necessary, year by year, to achieve a more productive and profitable farm business and better family living.

While the 120-acre farm was purchased in 1943 for less than \$4,000.00, over \$15,000 have been invested in farm and home improvements through 1953 as shown below: (this includes the 40 acres purchased in 1951)

	<u>Farm Improvements *</u>	<u>Home Improvements **</u>	<u>Total</u>
1944	\$ 347.00	\$ 76.97	\$ 423.97
1945	1,088.96	374.91	1,463.87
1946	None	285.40	285.40
1947	1,936.09	350.85	2,286.94
1948	3,468.97	876.36	4,345.33
1949	2,819.85	322.29	3,142.14
1950	1,255.07	26.13	1,281.20
1951	744.36	167.53	911.89
1952	1,205.95	9.50	1,215.45
1953	<u>150.00</u>	<u>10.00</u>	<u>160.00</u>
TOTAL	\$13,016.25	\$2,499.94	\$15,516.19

*Major Farm Improvements include - terraces and outlets as shown on map; 2 ponds; liming entire farm once - some fields twice; constructed trench silo; new Grade A milk parlor; and new milk cooler; all weather stock water tank; new laying house; new granary and loading chutes; new tractor and other farm equipment; new concrete silo; milking machine and cooler; range shelter; barn remodeled with addition of concrete shed; and some dairy breeding stock.

**Major Home Improvements include - Home remodeling; addition of bathroom; modern kitchen; new refrigerator; gas heating system; pressure water system; sump pump in cellar; landscaping and new furniture and equipment.

B A L A N C E D F A R M I N G
MEANS BETTER FARMING AND BETTER LIVING

As shown on previous pages, Balanced Farming has gone far enough during a six or seven year period to make many dreams come true for this farm family. These include a productive farm business, an excellent dairy system, modern conveniences for better living and a sense of pride and security.

And, the family has grown too. The older son completed his work at the Missouri College of Agriculture and is now an Assistant County Agent; the younger one is a sophomore in college. The older daughter is married and she and her husband are developing a Balanced Farming program on a nearby farm while the younger one is now in the junior year of high school.

The real meaning of Balanced Farming to this family is revealed in the following quotations:

WHAT WE DID IN TEN YEARS

"The first year we didn't know about Balanced Farming so we just went along as we had done before. But the results were so disappointing. Then the second year - that was the first year with Balanced Farming - we maybe didn't get much done, but we started a Tennessee Valley Authority Phosphate demonstration plot. From the results of that plot we began to believe that our county Extension agent and farm and home supervisor knew what they were talking about. We were beginning to get eager.

"The next year, our second year with the Balanced Farm and Home Plan, we increased the amount of fertilizer per acre. We built our first waterway. We seeded our first crop of sweet clover in oats - got a right good stand too. We seeded Sudan the first time for summer pasture and seeded rye the first time for fall pasture and pasture for the next spring. We had never used these pasture crops before but now we wouldn't be without such pastures. They really put the milk in the pail and milk is what we sell. We also decided we would need a silo if we were to get the most from winter production. We built the concrete silo ourselves. There was work in such a job but we saved on construction cost. We also made our house a little more livable this second year.

"The third year in Balanced Farming we started using artificial insemination. There is another practice that has paid off. That was the year we got water in the house and modernized our kitchen. You have no idea how much labor we have saved by having the pressure system and water in our kitchen. We don't have water in the bathroom yet but step by step we get things done.

"The third year our waterways looked so well sodded that we started terracing and running the water into them. We also seeded our first alfalfa. The alfalfa lets us grow more hay per acre so we can carry more cows.

"Then another year rolled around. We built more terraces. We built a range shelter so we could get our pullets on clean range. New pasture is good for

pullets, as well as other animals. We bought a new tractor too. Maybe a new tractor doesn't mean much to some but to us, being able to buy a new tractor was a step in the right direction. We didn't overlook the home this year either. We put in a low pressure gas system and bought a new gas range. Now we are beginning to live.

"Then, before we could hardly believe it, we were starting on the fifth year in Balanced Farming. We were not looking behind anymore, we were looking ahead. The future was brighter than ever before. We built a milking parlor so we could sell quality milk at a higher price. We used high analysis fertilizers and ammonium nitrate to increase our crop yields. We finished our waterways and terrace system and built our first pond. We had to build a temporary silo because the other silo would no longer hold the silage we were growing. Everything was moving too fast. Another year was upon us and we started on the sixth year in Balanced Farming.

"In the sixth year, we renovated our 1st 10-acres of improved pasture. We reroofed the barn, then we remodeled the house. Up to now we had been doing those things that would make more income; now we were starting to use our money for protection. We rewired the building and put in electrical safety devices to prevent fire from electricity. We bought a pair of electric clippers to clip the cows. Imagine giving a cow a haircut. Surely does save time and headaches trying to keep milk clean and sanitary.

"In our seventh year in Balanced Farming we built a new granary, another pond and bought an adjoining 40 acres. Now we have 160 acres. It all fits a pattern and everything we have done has been like putting another piece in a jigsaw puzzle.

"The last three years have passed rapidly. During this time we have added a bathroom to the house, a sump pump for the cellar, remodeled the old barn, constructed a trench silo and bought a new cooler for the milk house. Despite two years of drought conditions, we have managed to maintain ourselves and move ahead.

"In a few more years we think we'll have our farm like we want it but we can't stop. New things are being discovered daily by the U.S. Department of Agriculture, College of Agriculture and by farmers on the farm. If we do not keep up with new things we will soon slip back where we were when we were using the old methods. Balanced Farming will keep you up with the newest things in farming just as it has us."

THE FUTURE OF BALANCED FARMING

Director Burch and his Missouri Extension staff view the future of Balanced Farming with confidence. It seems to them that it is an excellent way of gearing Extension's effort to ever changing conditions. In fact it is an approach, they feel, that will ensure that the Extension Service goes forward and not backward.

Director Burch, as do other agricultural leaders of the country, feels that Extension must keep close to the farm family and its problems and must continuously provide an effective contribution to their problems.

As one agricultural leader expressed the situation to Director Burch some years ago, "I come from the South. We either go from one mule farming to mechanized farming or we go out of the business." The Extension model must be alert to the progress in methods of doing Extension work. In the eyes of this agricultural leader, Director Burch, and a number of others, the Extension organization must continually appraise its function. "You either grow and go forward or you slip backward".

In this re-appraisal effort Farm and Home Planning attracted the eyes of many farm leaders as one way to render real help to the farmer and his family. As a consequence the Congress of the United States was asked to appropriate 18 million dollars to expand farm and home development work throughout the country. 22/ Seven million dollars were granted in 1954, and as the work gets underway more will be requested. In terms of the ratio of Extension workers to farm families, the long time objective is to have one agent for 500 farm families.

Returning to Missouri and the future of Balanced Farming, Director Burch and his staff make several observations that point up needs:

1. The business of farming is becoming more and more a highly technical and specialized one.
2. With declining prices for farm products and increasing costs, farmers must make more efficient use of the factors of production to maintain a net income that will pay a reasonable return for labor, management and capital.
3. The marketing of farm commodities is an increasingly essential management factor in the farm business.
4. That timely and localized agricultural outlook information must constitute an increased portion of the basis for developing and/or revising farm plans.
5. That the production of one man must feed more and more people as our population increases and the number of farms and farm workers decreases.
6. That adequate farm accounts provide the best means of measuring the efficiency of the farm business and financial gain or loss.
7. That the economic welfare of agriculture is more closely than ever tied to the welfare of other segments of our economy due to the inter-dependence arising from increasing specialization.

22/ The new money was requested for farm and home planning, marketing, and public affairs Extension Work. Due to circumstances prevailing, a large proportion of the amount granted will be used for farm and home planning work.

8. That the farm family should have a level of living comparable to non-farm families.
9. That research and education are constantly changing many technologies in agriculture.
10. That a complete, well organized and well operated Balanced Farming plan takes into account all of the above considerations and thereby enhances the chances for the success of that farming business. 23/

The State Extension Service has set the following objectives for Balanced Farming Work:

	<u>At Present</u>	<u>Objective*</u>
1. Number of farm families with complete Balanced Farming plans by 1963	40,000	50,000
2. Number of farm families with Balanced Farming plans substantially in operation by 1963	32,000	40,000

*These goals are based on a possible increase in funds for increasing agent staff by 50 during next five years.

The goals for 1954 call for 2,000 new farm and home plans and an increase of 10 new Balanced Farming Associations.

Since the time of establishing these objectives and goals the Congress has appropriated new money for farm and home development work. Missouri's share for farm and home planning, marketing and public affairs will approximate \$206,000. Most of it will be used to further Balanced Farming work. It is anticipated that 32 new Extension workers will begin work shortly. With the exception of 4 or 5 people, all others will be detailed on a full-time basis to Balanced Farming. Is it any wonder then that Director Burch is wearing a big smile these days and looking forward to more and better Balanced Farming?

RETROSPECT

How do Missouri agricultural people feel about Balanced Farming? What changes would have made this effort more effective?

The answers that one receives to such questions are almost identical. Missouri people feel good about the Balanced Farming method. They point out that this has been a trail blazing effort and that there are not many things that they would do differently if the work could be repeated. As you might expect, there is great pride in what has been accomplished. There also is great humility and an awareness that while many problems have been met and solved - that there still are others that need to be reckoned with. One hears the expression "unity but with elasticity" - meaning that the entire Extension staff is solidly supporting Balanced Farming but that there are some differences of opinion on details of procedures. Competent observers feel that this is a healthy sign.

23/ J.W. Burch. "A Plan of Work for Missouri Agricultural Extension Service for the period January 1, 1954 - June 30, 1955", Columbia, Missouri, P. 7-8

Missouri folks say that, since its inception in 1941, Balanced Farming has established itself as a means of improving farming as a way of life in rural Missouri - this business-like approach to farm and home management having been adopted by more than 25,000 families throughout the State. They mention that not only has Balanced Farming been enthusiastically received in Missouri but that it has been the object of study by numerous other states and foreign lands.

It is their feeling that Balanced Farming has proved itself through flood and drought. In many instances, home improvements, farmstead improvements and other planned investments have been completed on schedule despite such adversities, and feed supplies have proven adequate, in some instances, to the extent that herds have been increased in order to utilize available feed. 24

Dean J. H. Longwell is a strong supporter of Balanced Farming. In his opinion every farm family needs a plan which will enable it to make the most effective use of its managerial ability, labor, finances, and land in maintaining and improving its soil, produce the maximum amounts of useful crops and animals, and obtain the cash income required to promote a satisfactory home and family living. Like other Missouri people he feels that there is a need to push Balanced Farming faster. The new federal funds will help make this possible. In his opinion there has been some tendency for Extension workers to do too much of the planning. The trend toward using the group approach in Balanced Farming should help in this respect. He feels that the women's side of Balanced Farming needs strengthening.

Mrs. Katharyn Zimmerman, State Leader of Home Demonstration Agents, and her staff are firmly behind the Balanced Farming movement and feel that they are making substantial progress. They have recently completed plans to more closely integrate the work of the 2,500 Home Demonstration clubs of the state with the Balanced Farming program. In her opinion the primary problems from the women's standpoint in doing Balanced Farming work have been the lack of time and the inexperience of home agents. The rapid turnover of home agents and the difficulty of securing replacements have been basic troubles.

Moving away from the college of agriculture for a moment. What do some of the farm and home leaders of the state have to say about Balanced Farming? H. E. Slusher, President, Missouri Farm Bureau Federation, says:

"Better farm income, better farming, better farm homemaking, all present problems which have been attacked effectively from various angles by the Extension Service. Balanced Farming coordinates all of them and points to what, after all, should be the ultimate aim of farm programs, a better, more satisfying life on the farm. It is a matter of pride that Missouri is leading the way in this worthwhile movement."

Mrs. Paul Hiatt, President, Missouri Home Economics Extension Association, says:

"Balanced Farming is for the entire farm family. We like to think of it as a family cooperating together to make the best use of their resources. In Balanced Farming all the land, labor equipment and other resources on the farm

are taken into consideration. Balanced Farming helps in making the farm home more attractive and efficient. It means balanced and better living for all."

F.V. Heinkel, President, Missouri Farmers' Association, says:

"The Balanced Farming Program developed by the Missouri College of Agriculture has a great significance to the farmers of Missouri. It not only puts them in position, as individuals, to do something about their economic problems - to increase their income by lowering production costs - but it will also go a long way toward safeguarding the family-sized farm, which is the backbone of our Nation and the bulwark of Democracy. It is my earnest hope that all Missouri farmers will put the program into operation on their own farms at the earliest possible time.

"We have adopted the Balanced Farming program of the Missouri College of Agriculture Extension Service. We wholeheartedly endorse it for Missouri agriculture." 25/

And finally, how does Director Burch feel about the Missouri Balanced Farming effort? Needless to say he is proud of the accomplishments that have been made. But he is not over confident. As he has stated on many occasions - "We are sure of one thing, and that is we do not know all the answers or any considerable number of them about getting farm and home planning done, but we think it is the soundest and most fundamental approach, both from the standpoint of the farm family and from the standpoint of the Extension Service, that we have ever seen." 26/

In looking back on his experiences and the experiences of his staff over a period of years in Balanced Farming, Director Burch has made a mental note on the things that succeeded and those that did not. From this distilling process Director Burch has formulated a few fundamental generalizations on doing successful Balanced Farming work. They will serve to guide future work in Balanced Farming in Missouri and may be of assistance elsewhere.

1. First, the administrators of Extension work must be completely sold on it. They must get behind it and push it - push it hard.
2. Second, the staff must be sold on it, and their cooperation sought in every possible way.
3. The administrators must provide the climate and means for the development of close cooperation, and coordination of the staff so as to bring about a real team spirit and team play. They must provide an administrative environment which will permit each staff member to contribute to the maximum of his capabilities. Such an administrative environment cannot be one that rests on dictation. Director Burch feels that the use of the State Balanced Farming Committee and District Sub-committees, and having Extension specialists located in subject matter departments have helped immeasurably in securing cooperation and integration. Likewise the state policy of filling specialist positions with successful county agents has aided the integration process.

25/ "Balanced Farming in Missouri" Op. Cit.

26/ "The Missouri Plan" Op. Cit.

4. The Extension Service must take the lead in helping arrange for necessary facilities such as credit, terracing contractors, fertilizer, and good seeds if they are inadequate.
5. The provision of one or more assistant or associate agents per county is essential if the activity is to move ahead vigorously.
6. The family itself must develop its own plan. Professional workers may help and should call attention to possibilities with which members of the family are not familiar. Final decision or choice, however, must be made by members of the family if the plan is to be most useful.
7. Another essential for success is that these plans must be translated into action. It will be fatal if Extension assumes that once a family has made a plan that Extension's job is done.
8. The Balanced Farming approach fits all levels of managerial skill. The quality of planning will vary with the skill of the individual family.
9. The use of the group teaching approach will help speed the Balanced Farming effort and also help insure that the "service" aspects of Balanced Farming are kept to a minimum.
10. The Extension Service should not scatter its shots. If the Balanced Farming effort is to move forward, the Extension Service should confine its efforts to only 3 or 4 major problems.

In closing this account of the genesis and development of Balanced Farming in Missouri it seems only natural to return to Philosophy. We leave this question with you - "Is not Balanced Farming the living embodiment of the dignity of man and the development of the individual"?

Appendix A

AGRICULTURAL EXTENSION SERVICE STAFF
College of Agriculture - Columbia, Missouri
J. W. Burch, Director
R. R. Thomasson, Assistant Director

July, 1954

State Extension Agents

Mrs. Katharyn Zimmerman (Home Ec. Leader)

F. E. Rogers

Rena R. Jenkins

R. B. Baker

Mrs. Jennie D. Simpson

Vance Henry

Audra Robertson

B. W. Harrison

Grace Klenn

J. U. Morris

Mrs. Margaret Clifford

Frank Graham

Rowena Greene

Amy Kelly *

4-H Clubs

Mary L. Johnson

Robert S. Clough

Agricultural Editors

Charline Lindsay

E. B. Winner, Agricultural Editor

Lester Akers

Mrs. Rose Florea, Assistant

John Burkeholder

Arthur Edwards, Assistant

Mary Dell McCain

Richard Lee, Assistant

Grant Shrum

Paul Gwin, Assistant

Subject Matter Specialists

Agricultural Economics

Forestry

C. E. Klingner

L. E. McCormick

Gordon B. Nance

Horticulture

C. R. Meeker, Farm Mgt.

W. R. Martin, Jr.

Paul Bebermeyer, Farm Mgt.

Clyde Cunningham

Albert Hagan, Farm Mgt.

C. R. Pitney, Farm Mgt.

Poultry Husbandry

J. M. Ragsdale, Marketing

Schell H. Bodenhamer

O. E. Allen, Marketing

Walter Russell

Ted Joule, Marketing

Wendell Holman, Marketing

Agricultural Engineering

Soils

Marion W. Clark

John Falloon

Ralph L. Ricketts

O. T. Coleman

Herman J. Hall

Victor Jacobs

C. E. Stevens, Jr.

Carl Scheneman

Animal Husbandry

Clothing

E. S. Matteson

Orene Cowan

Sam S. Rowe

Charity Bye Shank

William Pugh

Home Management

Dairy Husbandry

Madonna Fitzgerald

M. J. Regan (On Leave)

Louise Woodruff

E. T. Itschner

Alice M. Alexander

Fred Meinershagen

Lillian Watkins

Field Crops

Nutrition

J. Ross Fleetwood

Flora L. Carl

Wm. J. Murphy

Josephine Flory

Entomology

Stirling Kyd

APPENDIX B

THE RURAL SITUATION IN MISSOURI

	<u>Land Use</u>	<u>Acres</u>
Total area in State		44,304,640
Total area in farms		35,123,143
Percent of total area in State		79.3
Total acres in commercial farms		30,548,220
Percent of area in farms		87.0
Cropland, harvested and idle		13,653,044
Land pastured, total		16,944,928
Cropland used only for pasture		5,103,949
Woodland pastured		5,804,522
Other than cropland and woodland		6,036,457
Woodland not pastured		2,693,788
Other land, (farmsteads, roads, wasteland)		1,831,383

Number of Farms

	<u>1950</u>	<u>1945</u>	<u>1940</u>	<u>1930</u>
Total in state	230,045	242,934	256,100	278,454
Farms reporting cropland harvested	191,678	210,571	232,877	239,199
Farms reporting livestock sold	187,248	--	220,543	--
Number of commercial farms	164,587	--	--	--
Farms reporting tractors	100,312	69,349	41,948	23,673

Size of Farms

	<u>1950</u>	<u>1945</u>	<u>1940</u>	<u>1930</u>
All farms: average acres	152.7	145.2	135.6	131.8
Commercial farms: average acres	185.6	-	-	-
Other farms: average acres	69.9	--	-	-

Distribution of farms by size:

Under 10 acres	13,254	14,908	14,811	11,013
10 to 29 acres	20,340	22,275	22,621	--
30 to 49 acres	23,200	26,098	29,369	--
50 to 99 acres	46,556	49,988	57,453	60,119
100 to 179 acres	60,039	64,157	70,858	--
180 to 259 acres	31,742	31,905	31,370	--
260 to 499 acres	27,479	26,657	23,989	21,658
500 to 999 acres	6,283	5,935	4,806	3,760
1,000 and over	1,152	1,011	823	583

Distribution of Harvested Crops

	<u>1950</u>	<u>1945</u>	<u>1940</u>
	(Thousand acres)		
Cropland harvested	12,264	12,902	12,400
Corn	3,892	4,658	4,222
Small grains	3,216	3,215	3,781
Wheat	1,167	1,175	1,853
Oats	1,491	1,914	1,728
Barley	76	78	176
Rye	32	48	30
Hay, all kinds	3,421	3,387	2,593
Lespedeza	1,671	1,532	--
Clover or timothy	945	1,239	840
Alfalfa	341	309	194
Soybeans	916	685	439
Cotton	590	397	390

Some Missouri Farm Investments

	<u>1950</u>	<u>1945</u>	<u>1940</u>
U. S. Index farm prices received	256	206	100
Number of farms	230,045	242,934	256,100
Average size of farm	152.7	145.2	135.6
Value of land and buildings:			
Average per farm	\$9,776	\$6,285	\$4,234
Average per acre	\$63.66	\$42.28	\$31.87
Value of livestock on hand:			
All livestock (\$1,000)	\$493,729	\$329,213	\$188,766
Horses, mules and colts (\$1,000)	12,243	38,179	51,973
Cattle and calves (\$1,000)	371,751	198,354	101,826
Hogs and pigs (\$1,000)	73,112	57,300	16,795
Sheep (\$1,000)	20,113	10,730	8,742
Poultry (\$1,000)	15,551	24,229	8,745

Value of Farm Products Sold

	<u>1950</u>	<u>1945</u>	<u>1940</u>
	(Thousand dollars)		
U. S. Index farm prices received	256	206	100
ALL FARM PRODUCTS	719,878		
All Livestock and Products	518,005	380,824	
Cattle and calves	196,353	157,371	46,292
Hogs and pigs	162,354	136,462	44,237
Dairy products	79,246	65,470	24,367
Poultry and poultry products	60,340	66,800	22,310
Sheep, lambs and wool	16,708	13,607	8,557
Other	1,031	--	--

	<u>1950</u>	<u>1945</u>	<u>1940</u>
	(Thousand dollars)		
ALL CROPS SOLD	193,300		
All Field Crops Sold	183,840	111,684	65,676
Cotton	72,223	50,913	23,225
All small grains	36,592		
Soybeans	31,683		
Legume and grass seed	8,079		
Hay and silage	4,856		
Irish potatoes	2,875		
Tobacco	2,409		
Horticultural specialties	8,394		
Fruits and Nuts	4,077		
Vegetables	2,989		
Forest Products	2,573	1,795	856

Some Missouri Farm Operating Costs

	<u>1950</u>	<u>1945</u>	<u>1940</u>
	(Thousand dollars)		
U. S. Index of prices paid by farmers	255	189	124
Feed for livestock and poultry	117,842	113,202	25,246
Livestock and poultry purchased	114,246	61,969	--
Hired Labor	47,853	40,481	16,699
Petroleum fuel and oil for farm operations	32,545	--	7,802
Seeds, plants, etc.	16,823	9,850	
Tractor repairs	11,764	--	--
Other farm machinery repairs	10,934	--	--

Farm Operators

	<u>1950</u>	<u>1945</u>	<u>1940</u>
NUMBER:			
All Operators	230,045	242,934	256,100
Managers	555	810	1,182
Part Owners	36,674	31,552	29,836
Tenants	46,389	65,146	91,115
Full owners	146,427	145,426	133,927
Proportion of tenancy (%)	20.2	26.8	35.6

AGE:

Under 25 years	5,553	3,935	7,368
25 to 44 years	76,812	82,252	97,125
45 to 64 years	96,363	100,047	108,871
65 and over	37,189	43,905	43,354
Average age	49.8	50.5	49.6

Family Living

	<u>1950</u>	<u>1945</u>	<u>1940</u>
Total farms (commercial and other)	230,045	242,934	256,100
Farms reporting telephones	106,768	109,055	99,799
Farms reporting electricity	159,187	--	45,355
Farms reporting automobiles	144,552	--	162,640
Farms on surfaced roads	148,069	--	123,169
Farms reporting electric water pumps	53,546	--	--

POPULATION

Year	<u>Urban</u>	<u>Rural</u>	Percent Increase over preceding Census		Percent of Total Population	
			Urban	Rural	Urban	Rural
1950	2,290	1,665	16.8	-8.7	57.9	42.1
1940	1,960	1,824	5.5	3.0	51.8	48.2
1930	1,859	1,770	17.2	-2.6	51.2	48.8
1920	1,587	1,817	13.9	-4.3	46.6	53.4
1910	1,394	1,900	23.5	-4.0	42.3	57.7
1900	1,128	1,978	31.6	8.6	36.3	63.7

Distribution by Acres, 1950

	<u>Percent of Total</u>	<u>Persons (Thous.)</u>	<u>Percent Change From 1940</u>	<u>Persons per Household</u>
State	100.0	3,955	/ 4.5	3.18
Urban	61.5	2,433	/ 16.8	3.09
Rural Non-farm	16.6	658	/ 13.5	3.08
Rural Farm	21.8	863	- 22.8	3.54

Distribution by Age Groups, 1950

	<u>State</u>	<u>Rural Farm</u>	<u>Rural Non-farm</u>
Percent Under 20 Years	31.8	37.2	33.9
20 to 49 years	42.2	37.8	35.5
50 to 69 years	19.8	19.2	20.5
70 years and over	5.9	9.2	5.6

EDUCATION

Percent Enrolled in School - 1950

<u>Age Group</u>	<u>Urban</u>	<u>Rural</u>	<u>Rural Farm</u>
		<u>Non-Farm</u>	
5 and 6 years	42.2	43.5	45.2
7 to 13 years	95.0	94.7	95.2
14 and 15 years	91.6	88.8	86.8
16 and 17 years	72.3	68.5	68.4
18 and 19 years	34.6	25.3	22.5
20 to 24 years	15.7	6.2	5.4
25 to 29 years	7.8	3.4	4.8

April, 1953

Number of Rural High Schools	606
Number of Rural High Schools with Enrollment of less than 100 pupils	251
Number of counties having vocational agriculture departments	107
Number of vocational agriculture departments	250
Number of teachers of farm veterans	400
Number of vocational home economics departments	304
Number of non-vocational home economics departments . . .	207

APPENDIX C

SUGGESTED OUTLINE - BALANCED FARMING SCHOOL

This outline gives the suggested procedure for a series of meetings to be held with groups of farm families to develop Balanced Farm and Home Plans. It is suggested that:

1. The number in the group not exceed 10-15 pre-enrolled families.
2. Meetings be held only during the day from 10:00 or 10:30 a.m. to 3:00 or 3:30 p.m.
3. Farm homes, church or hall basements, schools and Vocational Agricultural Departments are suggested as meeting places.
4. Arrangements be made for the county agents to visit each farm at least once between the first and third meeting to become acquainted with the farm, and to assist with the water management. The Home Agent visit each family (on appointment), before the end of the series.
5. Meetings be held once each week, on the same day each week until plans are completed.
6. Meetings be confined to the months from October to March, inclusive.
7. Ample workbooks, pencils, maps of farms, enrollment, illustrative material be prepared in advance.
8. Specialist assistance be used only when needed to aid in presenting subject matter.
9. Arrange for subject matter to be presented in 45 to 90 minutes at the beginning of each school period, make satisfactory arrangements for lunch, and work on the plans in the afternoon.
10. Develop schedule for Family Living phase of Balanced Farm planning to run concurrently.
11. Start each meeting with a joint meeting to:
 - a. Summarize work to date
 - b. Answer questions
 - c. Explain work for day
12. At the close of each meeting with the women, the Home Agent should briefly outline the plans for the next women's work session.
13. This outline should be adapted to your county and your group. Some groups may complete their plans in fewer meetings, other groups may require more.
14. Preliminary Meeting - Organization, Tour
In those counties where such is available, a farm on which there is a good Balanced Farming plan in operation might be toured in advance of the school in order to give the group a thorough understanding of what Balanced Farming is and what its possibilities are. On this tour, the "before" and "after" situation should be stressed - production, livestock numbers, gross and net income, investment, family living, etc. The entire group should attend. This is suggested as a means of motivation. Work out information in advance.

At this time, agents might explain, as necessary, plans for the school and agree as to dates, places, etc.

First Meeting - First part to be joint meeting—men and women working together.

1. Present in the best way possible the advantages to be gained from developing a Balanced Farm Plan. These advantages include:
 - a. Better family living
 - b. Higher net income
 - c. Increased soil fertility
 - d. Soil erosion control
 - e. More pasture for livestock
 - f. More feed produced
 - g. Less labor required
 - h. Control certain parasites and diseases
 - i. Improved community

The new Balanced Farming movie or slides are effective aids.

2. Outline the proposed program for the school.
3. Distribute handbooks and workbooks.
4. Briefly review each page of farm workbook and point out where references may be found in handbook to assist in filling out that particular page. Each couple list the goals for the family living plan.

The work period for the men at this first meeting would be devoted to completing the check sheet, recording present resources on pages 2 and 3, preparing the present layout map of the farm (page 5), recording crop history (page 5) and entering present livestock members (page 11).

Subject for Women - Family Needs

The first work period for the Family Living phase should be devoted to a discussion of the needs of the family and the advantages of long time planning for the use of cash and non-money income. Each woman should check F.L.W.4 (assistance desired in Planning Family Living). Home Agent may use the 12 slides on Family Living for loan from Home Management specialists.

Second Meeting: It is suggested that the farm of one of the families be selected as a "guinea pig" for developing a Balanced Farming Plan.

For the morning session, tour the farm with the whole group, studying present layout, cropping system, enterprises, farmstead arrangement, and home. Use attached sheet "Walking the Farm", for suggestions. Demonstrate soil sampling.

Select this farm during previous meeting, - agents visit farm to decide upon water management plans, etc., family living problems and to get soil samples. Information for use in subsequent meeting should be prepared in advance of meeting to save time in discussions.

Afternoon Session: Subject for Men - Water Management and Field Layout

1. Discuss principles involved in developing a desirable water management plan for the farm. Use of the blackboard and/or farm maps with good systems planned or in operation are of value for this purpose. Point out location of waterways, terrace lines, field boundaries, pasture lanes, drainage ditches, watering facilities, poultry and hog sanitation systems, and other features of a good water management system. Explain how this contributes to efficiency in operation of the farm, etc.
2. Outline methods of water management construction in the county. This would include the use of contractors, county equipment, and home owned equipment. Arrange for one or more contractors if not now available.
3. Discuss soil testing program and request that group take samples for their farms and bring them to next meeting.
4. Have the group outline in so far as possible their revised farm layout map showing features of water management desired (page 7). (This step probably cannot be completed at this session, and must be followed up by agent and farmer on a trip over the farm to check the details in developing the water management plan).

Subject for Women - Planning the Family Food Supply

1. Discuss the cash demands for food, the possibility of extending the cash and improving health by planned production and conservation.
2. Make use of the information from the check sheets on food supply or garden.
3. During the work period each person should make the complete food plan, pp. 8, 13 & 14 in Workbook, or the Food sections in FLW 2, "Family Living Plan" (Short form).

Third Meeting: Pasture and Feed Balances

1. Discuss cropping systems locally adapted which will contribute to efficient pasture and feed production, - varieties, rates of planting, management, etc.
2. Work out with group the present pasture balance for "guinea pig" farm. Analyze.
3. Work out with group the present feed balance for farm. Analyze. (2 and 3 should be worked out previously to save time here).

The work session might be devoted to completing the water management plan for all farms. By this time the agent should have had time to visit each farm and be in position to assist with the water management plans. Work might be started on pasture and feed balances in line with revised farm layout. (Pages 10 and 11).

Soil samples received should be tested prior to next session.

Subject for Women - Housing and Clothing Needs

This meeting should be devoted to subject matter and special information pertaining to the needs of the group as listed in FLW 4 summarized after the first meeting; example, kitchen, bathroom, storage, or yard planning, etc.

The work period should be devoted to a discussion of general problems, and principles to be applied. These problems should be centered on the family clothing needs and those of the home.

Fourth Meeting: Livestock, Soil Fertility, Revised Cropping Systems

1. Present subject matter dealing with soil fertility - basic, starter, maintenance. Give out results of soil tests. Use tests from pilot farm to illustrate this discussion.
2. Discuss Livestock enterprise - feed and management requirements. Adaptability as to size of farm, desires of family, markets, available labor, capital required, returns expected, etc.
3. Work out for pilot farm the revised cropping system, pasture and feed balances with group following through.

The work session might well be devoted to entering in the "Inventory of Soil Resources" (page 6) the results of the soil tests. Continue with development of cropping system that will provide satisfactory pasture and feed balances for chosen enterprises. This might involve considerable adjustment for most families as a maximum of two major enterprises is recommended in most cases. Time probably will not permit satisfactory completion of this phase of the work during the work period. It is suggested that the family try alternate possibilities at home before the next meeting in order to arrive at the ultimate plan to be used.

Subject for Women - Continuing Work on Housing and Clothing

Finish any subject matter presentation on the Home and Clothing phases, and complete the forms in Family Workbook, pages 17 and 23 and/or forms in FLW 2.

Fifth Meeting

1. Complete subject matter information with reference to livestock soils, and crops.
2. During work period complete pages 8 and 9, including the productivity index (p. 13) if to be used.
3. Discuss Forms B.F.I. to V. (as applicable) and have group fill these out and attach to page 12 - to supplement their livestock management programs.

These may serve as aids in estimating capital investment requirements.

Subject for Women: Home Equipment and Furnishings

1. Discussion of contribution of labor saving equipment and serviceable furnishings to the family.
2. Each person work out the long time plan for additions and replacements - p. 24 Workbook or form in FLW 2. Also 1 year plan for Household Operation, p. 25 in the workbook or form in FLW 2.

Sixth Meeting

1. Complete information to be used on pages 14 and 15 dealing with farm income and farm expense.
2. Complete information required on pages 16 and 17.
3. Illustrate this phase by working out with group these steps for pilot farm. Past farm accounts are excellent guides for estimating expenses.
4. Have various members of the group present different phases of the plan for their farm to the entire group.

Subject for Women: Estimates of Annual Cash Expenditures for Family Living

1. Complete entries on pages 26-29 Workbook, or in FLW 2.
2. Transfer information from all work pages in book to summary on page 20 and 31 Workbook or summary in FLW 2.
3. Complete summary.
4. Information needed from the Balanced Farming Workbook may be previously copied or may be put in after that has been completed during the last meeting.

Seventh Meeting: Farm Records and Income Tax Reporting — Joint Meeting
(This meeting may well be timed near first of year and could be fit anywhere in schedule)

1. Discuss farm records, - their value from standpoint of analyzing business, measuring financial progress and net worth, etc.
2. Distribute record books and explain their use, by going through the book in some detail - mechanics of summary and sources of tax reporting items. Record books are simple when we understand them.
3. Discuss Family Living expense sheets.
4. Using Record Books and 1040 F Forms, explain value of inventories, depreciation schedules, etc. in minimizing taxable incomes.

This phase of the work will probably need some follow-up with the family to help set up complete inventories, depreciation schedules, and to assist them with individual accounting problems.

The last meeting can very nicely be made into a commencement meeting with a basket lunch at noon and the men and women reporting the plans for their farms and the entire group discussing and criticizing these plans.

Follow-Up

1. Agents visit each farm at least once during the first three weeks following the group meetings. Assist the family to complete their plans and to get into operation the revisions called for as required.
2. Provide facilities if you want Balanced Farm Plans to be followed. Arrange for water management contractors with good equipment, fertilizer dealers with ample supplies, forms for water tanks and septic tanks, purebred sires, good seed, etc.
3. Plans for farmstead improvement should be entered on pages 18-19 and probably would be best handled on individual basis as a follow-up phase of the school.
4. Home Agents may work on actual scale drawings or other plans with individuals.
5. Home Agent file list of improvements to be made and check on progress. A tour may be worked out to show principles employed in completing improvements.

"Walking" the Farm

(Suggested Procedure)

A systematic method of procedure and a careful recording of field notes are essential. Details that you think you will surely remember will grow "cold" after you have visited several farms and several weeks have gone by.

Take the farm operator with you. You will want to know a lot of things that only he can tell you.

Have with you two outline maps of the farm: one on which to record notes for water management, the other for recording location of soil samples taken.

1. Walk the entire outer boundaries of the farm. Note and record on map:
 - (a) stabilized water courses
 - (b) other water courses draining onto the farm and the approximate acreage in the drainage area
 - (c) water courses leaving the farm
 - (d) likely waterway locations
2. Walk each field. Note and record:
 - (a) drainage ways
 - (b) ridges: direction and approximate percent of slope
 - (c) main slopes: direction and percent
 - (d) locate approximate contour line about halfway down on each watershed
 - (e) high point or points
 - (f) point of entrance into and through field
 - (g) land use appraisal based on highest use, practical.

- (1) corn
- (2) soybean
- (3) small grain
- (4) hay
- (5) pasture
- (6) woodland

- (h) kind and condition of fences
- (i) existing terraces, watersheds, ponds, etc.

3. Caution. Don't be stamped into giving snap judgment on details of water management or crop use of field. Revising your ideas out loud too many times destroys the farmers confidence. Tell him you want to consider the farm as a unit and think through the best plan possible. Take your notes in and work out a tentative water management plan. Then develop the cropping system. Then revise the water management plan if advisable.

4. Soil Samples. Show the operator how to take and label samples and record location on map. Then let him take samples on the other fields.

